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T H E
W O R K S
O F
THOMAS SYDENHAM, M. D.

O N
ACUTE AND CHRONIC DISEASES;
WHEREIN THEIR
HISTORIES AND MODES OF CURE,
AS RECITED BY HIM, ARE DELIVERED
WITH ACCURACY AND PERSPICUITY.

TO WHICH ARE SUBJOINED
N O T E S,
CORRECTIVE AND EXPLANATORY,
FROM THE MOST EMINENT MEDICAL WRITERS;
ADAPTING THE WHOLE TO THE PRESENT IMPROVED STATE OF PHYSIC,
AND SHEWING UNDER WHAT
CLASSES, ORDERS, AND GENERA,
MOST OF THE COMPLAINTS TREATED OF ARE ARRANGED BY
N O S O L O G I S T S :

WITH A VARIETY OF ANNOTATIONS BY
G E O R G E W A L L I S , M. D.

I N T W O V O L U M E S .
V O L . I .

Naturæ servus fuit sapientissimus—

— Cui, pudor, & justitiæ foror

Incorrupta fides, nudaque veritas

Quando ullum invenient parem?—

HOR. CARM. XXVI.

L O N D O N :
PRINTED FOR G. G. J. AND J. ROBINSON, W. OTRIDGE,
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M.DCC.LXXXVIII.

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T O

L O R D . T H U R L O W ,

L O R D H I G H C H A N C E L L O R O F

E N G L A N D .

VARIOUS are the unpleasing motives, my Lord! which give birth to dedications. Some authors, little in themselves, love to creep beneath the wings of distinguished characters to steal a consequence, or impose upon the world a belief that they move in habits of intimacy, or are honoured with the smiles of greatness.—Some, confiding in the weakness of their patrons, approach them in the dress of fulsome adulation, and, secure in their vanity, labour to swell out trivial qualifications into eminent abilities, and so to emblazon private virtues, that their real existence becomes disputable,

almost extinguished, as it were, by the false glare of hyperbolic extravagance;—some bend the sycophantish knee to episcopal dignity, and boldly publish to the world, what religious perfection wishes to lie hid, under the veil of that humility by which she is so characteristically distinguishable; nay, my Lord! even ask leave to commit these offences, and what is more extraordinary, are successful in their applications.

It will not be considered as an offence in me, I hope, to confess, that such requests I think derogatory to the character of a man, and ought to be disgusting to a patron;—that Nature has not formed me of such pliant materials as to stoop to flatter a man, *merely* because he is ennobled, or elevated amongst the higher orders of the world; or that I lack *that* something more than modest confidence to petition my patron to consent, for my own sake, to load him with false or exaggerated praise, and render him an object for the shaft of satiric wit—'tis not in me by any of these incentives to be moved;—unknown to your Lordship, I cannot be stimulated by interested views;—struck with the power of public virtue, by that alone is my pen persuaded to pay its just tribute; nor should I have here thought of affixing your Lordship's name, was I not warranted,

ranted by the apparent similitude of character which exists, at least in the grand outlines, between yourself and SYDENHAM.—Men, who float superficially on the tide of things, the injudicious and prejudiced, may be astonished at the comparison, and fools, becoming boisterous at truths they cannot trace, consider it as an indignity;—but let them reflect, that a Physician possessed of sagacity, prudence, judgement, and integrity, adequate to a SYDENHAM, is one of the first characters in the world—*Proximus est Deo*—for he can relieve the misery of a monarch, and oftentimes snatch him from impending fate; when all the wealth with which he is loaded, all the honour and power with which royalty is surrounded, cannot even mitigate the severity of a single pang. He, in this moment at least, my Lord! is greater than a king.—Forcible however as is this argument, it cannot work miracles, it cannot clear away the mist from the eyes of folly; I therefore to the rational and candid only make my appeal.

In that period of time, when the medic art was built upon the tottering basis of hypothesis, and supported by the enthusiastic zeal of whim and bigotry; when their adherents, turning tyrants to nature, attempted to torture her to their purposes,

and would not condescend to pursue the paths she pointed out, when they endeavoured to bind in their trammels, and drive her obedient to their wishes; as if they thought it beneath their consequence to stoop to the dictates of heaven's first agent; who, proud in opinion, slew numbers by the rules of art, gaining applause from those only, who escaped by the laws of chance—In that period arose SYDENHAM, whose natural sagacity led him to detect error; whose love of mankind made him exert a courage to correct it; and who, amidst the opposition of hypothetic tyranny, supported his positions, and overturned, by simple observation and experience, the long-laboured and supposititious reasoning of the whole dogmatic phalanx—He, my Lord! made truth his principle, and philanthropy his motive;—improvement in medicine was the result of his attention; true knowledge the delight of his soul, the purport of his pursuit; conscious of the rectitude of his principles, though *he* shrunk at the arrows of defamation, perseverance was his virtue; and, amidst the taunts of calumny and sarcastic jeers of envy, he still became a conqueror.

Your Lordship arrived at that acme, only just not possessed of royalty, has made truth the principle

ciple of *your* pursuit ;—where sophistry has attempted to cloath fallacy in the garb of facts, your Lordship has had penetration to discover the deception ;—where precedents have outlived their use, perception to see the futility of acting in conformity to them, and fortitude to make alterations adapted to the nature of the exigencies, amidst the subtle efforts of blind timidity, and clamour of unenlightened insolence.—Where men, aggrandized by birth or the partiality of power only, have arrogated to themselves an empty superiority, you have convinced the world, that common custom, though she deals out stars and coronets, must give place to common sense ; and that integrity and ability were preferable to the external ornaments of high birth and supercilious presumption ;—in fine, truth being your only beacon, you have had the laudable boldness to support her amidst the artifice of self-interest and war of political violence ; and, my Lord ! conquest has been your reward . . . It is on these considerations that I have been induced to draw the parallel—It was from sources similar to these that Fame shed her brightest honours round the head of a SYDENHAM, and wasted him, thus adorned, in all their glow to posterity.—Thus will it fare with every character blessed with superior abilities ; who, making truth the object of their inquiries, labour to

A 4

establish

establish the welfare of mankind on so indissoluble a basis ;—from hence will they be handed down an ornament and an honour to society, whose names by her will only be survived ;—for TRUTH *must live*, my Lord! in all her pristine vigour, “ amidst the wreck of matter, and the crush of “ worlds.”

It is from the preceding reflections that I have been induced to dedicate these my labours to your Lordship ;—which, should they meet your eye, and be construed into offence, because I have unpermitted taken such a liberty, I shall be sorry ;—but must leave the motive to plead my apology, convinced, it must be allowed, that the heart which means no ill, can do no wrong.

I have the honour to subscribe myself, my Lord!
with all due deference,

Your LORDSHIP'S

most obedient servant,

G E O. W A L L I S.

South Molton Street,
Grosvenor Square,
Oct. 18, 1788.

T H E
P R E F A C E.

ON the republication of the works of our favourite author, SYDENHAM, little will be necessary to be advanced, respecting the utility; for they have past the ordeal trial, and stood, unshaken, the test of time, notwithstanding the various doctrines which have crowded into the medical schools, and dropt into oblivion since their first appearance. His writings were the result of observation, and his labours founded on experience; and though he has wandered now and then in the field of speculation, his guide has been simple facts, contending to support certain positions *à posteriori* by plain reasoning, rather than attempting to prove *à priori* what would be the result of some imaginary principles; hence, though his arguments may be fallacious, his conclusions cannot be mischievous; because he first enumerates the symptoms of the disease as they appear, then watches the progress, and points out the different modes which have been successful in the different periods. And thus he forms the basis of his practice, exercising his reasoning powers in accounting for the mode in which Nature performs the process; or making probable conjectures at the offending cause, how it originates
and

and proceeds, adhering rigidly still to the methods of which experiment has proved the propriety. Indeed, so convinced have later times been of the validity and accuracy of his descriptions, that they are considered as the unrivalled delineations of Nature;—so universally have they been esteemed for their exactitude and truth, that poets never made freer use of, or stole more from HOMER, PINDAR, or VIRGIL; satyriste from JUVENAL, PERSIUS, or HORACE; orators from DEMOSTHENES, QUINTILIAN, or CICERO; nor dramatists from a SHAKESPEARE, than physicians have from a SYDENHAM. But as men of the highest abilities, extensive knowledge, and indefatigable assiduity have not thought it unworthy of them to devote their time solely to the investigation of medical subjects; as a HOFFMAN, a BOERHAAVE, a GAUBIUS, SAUVAGES, and a CULLEN, have written elaborately and perspicuously on medicine, have successfully endeavoured to render things which were formerly most complex, now the most simple; and in a great measure to divest the art of all that load of lumber under which it lay struggling; and as many others of an inferior order have added, though less copiously, not less elegantly, many improvements, it has been thought necessary to add such as properly belong to this work in this edition, in order to render it as valuable as the present improved state of physic will permit.—Nor has the Editor been sparing of his labour in searching into the various periodic publications, which enrich the medical repositories, and do honour to the age, and making use of such materials as appeared

peared to him, well adapted to his subject, when they were totally freed from the miraculous and marvellous, and seemed not to wanton too much in credulity;—happy in affixing names of consequence to opinions he thought his own, wherever he found them supported by such characters as were eminently distinguished in the medical hemisphere; or, in fine, however trifling the individual in the great scale, where truth was obviously the foundation—well aware, that a greater deference, and more fixed attention, would be justly paid to those opinions thus strongly established, than to any which he, launching into public notice, might advance on his single authority.

With respect to the Translation, the present Editor has done little more than compared that of Dr. SWAN with the original; and where he has found any errors, which indeed are too few even to mention, he has endeavoured to alter them.—For the Doctor has given, in general, the full sense of the original; and though the language might be here and there meliorated, in justice to his labours it has been thought better to be guilty of this unimportant omission, than considered hypercritical.—But with regard to his Notes, however applicable they might have been at the time in which he wrote, still the multifarious improvements which have occurred since that period, the more certain theory which has been established, have rendered it necessary to rescind the greatest part of them; only letting such, or a part, stand, as seemed to be consistent with the rational practice of this day. Whatever liberties
of

of this kind have been taken, originated not from a desire of altering or rejecting, but of improving. How far, or how judiciously this has been executed, must be left to the determination of public opinion; and whatever may be the fate of the present performance, though it should fail of meeting with that applause, which the motive at least may merit, it will prove, that the annotator has not been an indolent steward—*Talentum, quantulumcunque, non sepelivit*—but has acted in strict conformity to his duty as a physician and philanthropist.

QUIA, nostrum est laudatissimam, PUTAT, quam SYDENHAMUS calcavit viam, omni curâ prosequi: illudque quod ipsi defuit, nostra industria supplere, augere, variisque inventis locupletare, & hac ratione ad majorem perfectionem, quoad theoriam, & exercitationem artem perducere.

THE LIFE OF
DR. SYDENHAM.

THOMAS SYDENHAM was born in the year 1634, at Windford Eagle in Dorsetshire, where his father, William Sydenham, Esq. had a large fortune;—under whose care he was educated, or in what manner he passed his childhood; whether he made any early discoveries of a genius peculiarly adapted to the study of nature, or gave any presage of his future eminence in medicine, no information is to be obtained. We must, therefore, repress that curiosity which would naturally incline us to watch the first attempts of so vigorous a mind, to pursue it in its childish inquiries, and see it struggling with rustic prejudices, breaking on trifling occasions the shackles of credulity, and giving proofs in its casual excursions, that it was formed to shake off the yoke of prescription, and dispel the phantoms of hypothesis.

That the strength of SYDENHAM'S understanding, the accuracy of his discernment and ardour of his curiosity might have been remarked from his infancy by a diligent observer, there is no reason to doubt. *For there is no instance of a man whose history** has been minutely

* *For there is no instance of a man whose history, &c.* This assertion seems to be infinitely too latitudinous; for history, as well as common observation, will furnish innumerable instances of men, who have in the middle and latter periods of life been distinguished by their eminent abilities, that in the earlier stages have given no great proof

nutely related, that did not in every part of life discover the same proportion of intellectual vigour; but it has been the lot of the greatest part of those who have excelled in science, to be known only by their own writings, and to have left behind them no remembrance of their domestic life or private transactions, or only such memorials of particular passages as are, on certain occasions, necessarily recorded in public registers.

From these it is discovered that at the age of eighteen, in 1642, he commenced a commoner of Magdalen Hall in Oxford, where it is not probable that he continued long; he informs us himself, that he was withheld from the university by the commencement of the war; nor is it known in what state of life he engaged, or where he resided, during that long series of public commotion. It is indeed reported, that he had a commission in the King's army, but no particular account is given of his military conduct; nor are we told what rank he obtained, when he entered into the army, or when, or on what occasion he retired from it.

It is, however, certain, that if ever he took upon him the profession of arms, he spent but few years in the camp; for in 1648, he obtained at Oxford the degree of bachelor of physic, for which, as some medicinal knowledge is necessary, it may be imagined that he spent some time in qualifying himself.

His application to the study of physic was, as he himself relates, produced by an accidental acquaintance

proof of intellectual vigour. SWIFT manifested no signs in his juvenile years of that strength of understanding for which he was afterwards so universally extolled; for we find, from Lord Orrery's account, that he was admitted to his first degree in the seminaries of learning "*speciali gratiâ*," through particular indulgence. It is, however, of no consequence; it adds no ray of honour to the character of a man to be blessed with the rich gifts of nature; the *proper* cultivation and application of such abilities are what alone merit the voice of fame, which so liberally and so justly has been bestowed on SYDENHAM. *W.*

with

with Dr. Cox, a physician eminent at that time in London, who in some sickness prescribed to his brother, and attending him frequently on that occasion, inquired of him what profession he intended to follow; the young man telling him that he was undetermined, the doctor recommended physic to him, on what account, or with what arguments, it is not related; but his persuasions were so effectual, that SYDENHAM determined to follow his advice, and retired to Oxford for leisure and opportunity to pursue his studies.

It is evident that this conversation must have happened before his promotion to any degree in physic, because he himself fixes it in the interval of his absence from the university, a circumstance which will enable us to confute many false reports relating to Dr. SYDENHAM, which have been confidently inculcated, and implicitly believed.

It is the general opinion, that he was made a physician by accident and necessity, and Sir Richard Blackmore reports in plain terms, that he engaged in practice without any preparatory study, or previous knowledge, of the medical sciences; and affirms, that when he was consulted by him what books he should read to qualify him for the same profession, he recommended Don Quixote.

That he recommended Don Quixote * to Blackmore, we are not allowed to doubt; but the relater is hindered

* *He recommended Don Quixote, &c.* There cannot be the least shadow of doubt, but SYDENHAM thought Dr. BLACKMORE more calculated for Quixotical enterprizes, than the serious, indefatigable pursuits of medical subjects, and therefore wittily gave him this advice, doubtless for the best purpose. Sir Richard Blackmore's report of such a circumstance, given as a proof of SYDENHAM's neglect of preparatory study, or previous knowledge in those branches necessary for the cultivation of this art, betrays more malvolence than candour; and shews in no slight degree, his own want of sagacity; silence on this subject would have afforded a proof of much more sound policy. *W.*

† Preface to Dr. Blackmore's Treatise on the Small Pox.

by

by that self-love, which dazzles all mankind, from discovering that he might intend a satire very different from a general censure of all the ancient and modern writers on medicine, since he might perhaps mean either seriously or in jest, to insinuate, that Blackmore was not adapted by nature to the study of physic, and that, whether he should read Cervantes or Hippocrates, he would be equally unqualified for practice, and equally unsuccessful in it.

Whatsoever was his meaning, nothing is more evident than that it was a transient folly of an inclination warmed with gaiety, or the negligent effusion of a mind intent on some other employment, and in haste to dismiss a troublesome intruder; for it is certain that SYDENHAM did not think it impossible to write usefully on medicine, because he has himself written upon it; and it is not probable that he carried his vanity so far, as to imagine that no man had ever acquired the same qualifications besides himself. He could not but know that he rather restored than invented most of his principles, and therefore could not but acknowledge the value of those writers whose doctrine he adopted and enforced.

That he engaged in the practice of physic without any acquaintance with the theory, or knowledge of the opinions or precepts of former writers, is undoubtedly false; for he declares, that after he had, in pursuance of his conversation with Dr. Cox, determined upon the profession of physic, he *applied himself in earnest to it, and spent several years in the university*, aliquot annos in academicâ palæstrâ, before he began to practise in London.

Nor was he satisfied with the opportunities of knowledge which *Oxford* afforded, but travelled to *Montpelier*, as *Desault* relates,* in quest of farther information; *Montpelier* being at that time the most celebrated school

* Dissertation on Consumption.

of physic: *so far was SYDENHAM** from any contempt of academical institutions, and so far from thinking it reasonable to learn physic by experiments alone, which must necessarily be made at the hazard of life.

What can be demanded beyond this by the most zealous advocate for regular education? What can be expected from the most cautious and industrious student, than that he should dedicate several years to the rudiments of his art, and travel for further instructions from one university to another?

It is likewise a common opinion, *that Sydenham was thirty years old* † before he formed his resolution of studying physic, for which I can discover no other foundation than one expression in his dedication to Dr. *Mapletoft*, which seems to have given rise to it by a gross misin-

* *So far was SYDENHAM, &c.* Ridiculous as this accusation against SYDENHAM must appear, and absurd as is the adoption of any similar idea, yet there are not wanting practitioners who affect to despise all study, and reprobate theory, boasting that they depend on experience alone for directing their medical conduct.

It is to be feared, that notions like these deduce their origin rather from ignorance and vanity, than cool reflection or sound judgement: that the word experience from their mouths is a flagrant prostitution of the term; for how can men reap any advantage from experiments, or how be enabled to pursue or understand the documents from thence to be collected, without being well versed in the fundamental principles of the art to which they belong? What is the intent of study, but to acquire a thorough knowledge of such principles, and from thence form a rational theory? It may not unfairly be presumed for such a theory they mistake hypothesis, and labour more to justify their proceedings, by imposing on credulity, than from knowledge derived from practical observation. *W.*

† *That Sydenham was thirty years old, &c.* At what period he commenced his studies matters not; his works are a sufficient proof that he was at least one of the most shining characters in the healing art, from whence posterity have, and will continue to reap, more emolument than from all the united labours of those who wish rather to load him with calumny than praise; but it is the fault of biographers, in reciting anecdotes of their favourites, to be ridiculously eulogistical—an error pardonable only from the goodness of its motive. *W.*

terpretation; for he only observes, that from his conversation with Dr. Cox to the publication of that treatise *thirty years* had intervened.

Whatever may have produced this notion, or how long soever it may have prevailed, it is now proved beyond controversy to be false, since it appears that SYDENHAM having been for some time absent from the university, returned to it in order to pursue his physical inquiries before he was twenty-four years old, for, in 1648, he was admitted to the degree of bachelor of physic.

That such reports should be confidently spread, even among the contemporaries of the author to whom they relate, and obtain in a few years such credit as to require a regular confutation; that it should be imagined that the greatest physician of the age arrived at so high a degree of skill, without any assistance from his predecessors; and that a man, eminent for integrity, practised medicine by chance, and grew wise only by murder, is not to be considered without astonishment.

But if it be on the other part remembered, how much this opinion favours the laziness of some, and the pride of others; how readily some men confide in natural sagacity, and how willingly most would spare themselves the labour of accurate reading and tedious inquiry, it will be easily discovered how much the interest of multitudes was engaged in the production and continuance of this opinion, and how cheaply those of whom it was known that they practised physic before they studied it, might satisfy themselves and others with the example of the illustrious SYDENHAM.

It is therefore in an uncommon degree useful to publish a true account of this memorable man, that pride, temerity, and idleness may be deprived of that patronage which they have enjoyed too long; that life may be secured from the dangerous experiments of the ignorant and presumptuous; and that those who shall
here-

hereafter assume the important province of superintending the health of others, may learn from this great master of the art, that the only means of arriving at eminence and success are labour and study.

About the same time that he became a bachelor of physic, he obtained, by the interest of a relation, a fellowship of All Souls college, having submitted to the subscription required to the authority of the visitors appointed by the parliament, upon what principles, or how consistently with his former conduct, it is now impossible to discover.

When he thought himself qualified for practice, he fixed his residence in Westminster, became doctor of physic at Cambridge, received a licence from the college of physicians, and lived in the first degree of reputation and the greatest affluence of practice for many years, without any other enemies than those which he raised by the superior merit of his conduct, the brighter lustre of his abilities, or his improvements of his science, and his contempt of pernicious methods, supported only by authority, in opposition to sound reason and indubitable experience. These men are indebted to him for concealing their names, when he records their malice, since they have thereby escaped the contempt and detestation of posterity.

The same attention to the benefit of mankind which animated him in the pursuit of a more salutary practice of medicine, may be supposed to have incited him to declare the result of his inquiries, and communicate those methods of which his sagacity had first conjectured, his experience afterwards confirmed the success; he therefore drew up those writings, which have been from his time the chief guides of physic; and that they might be useful to a great extent, procured them to be put into Latin, partly by Dr. Mapletost, to whom part is dedicated, and partly by Mr. Havers of Cambridge.

It is a melancholy reflection, that they who have obtained the highest reputation by preserving or restoring the health of others, have often been hurried away before the natural decline of life, or have passed many of their years under the torments of those distempers, which they profess to relieve. In this number was SYDENHAM, whose health began to fail in the fifty-second year of his age by the frequent attacks of the gout, to which he was subject for a great part of his life, and which was afterwards accompanied with the stone in the kidneys, and its natural consequence, bloody urine.

These were distempers which even the art of SYDENHAM could only palliate, without hope of a perfect cure, but which, if he has not been able by his precepts to instruct us to remove, he has at least, by his example, taught us to bear; for he never betrayed any indecent impatience, or unmanly dejection under his torments, but supported himself by the reflections of philosophy and the consolations of religion, and in every interval of ease applied himself to the assistance of others with his usual assiduity.

After a life thus usefully employed, he died at his house in Pall-mall, on the 29th of December, in the year 1689, and was buried in the isle near the south door of the church of St. James in Westminster.

What was his character as a physician, appears from the treatises that he has left, which it is not necessary to epitomize or transcribe; and from them it may likewise be collected, that his skill in physic was not his highest excellence; that his whole character was amiable; that his chief view was the benefit of mankind, and the chief motive of his actions the will of God, whom he mentions with reverence, well becoming the most enlightened and most penetrating mind. He was benevolent, candid, and communicative, sincere, and religious; qualities which it were happy if they would copy from him, who emulate his knowledge, and imitate his methods.

THE

AUTHOR'S PREFACE.

1. SINCE the human body is so formed by ^{Origin of} nature, that, by reason of the continual ^{physic.} wear of its component particles and the force of external agents, it cannot always continue in the same state, whence numerous diseases have in all ages arisen; *doubtless the necessity of discovering a cure* * for them must have put mankind upon studying physic, long before the birth of the *Grecian*, or even the *Ægyptian Æsculapius*, who flourished a thousand years before the former.

2. In

* *Doubtless the necessity, &c.* If by physic we may be allowed to understand the application of all such things as alleviate, or are intended to relieve corporeal distress, it may be considered nearly coeval with man's existence. For man certainly, as an instinctive and rational animal, cannot be thought possessed of inferior degrees of sagacity to that of brutes, over which he has by Providence been ordained to reign superior; and they, on many occasions, apply remedies against their own maladies; various proofs of which arise every day to our view. Dogs afflicted with worms will swallow the long, four grass, as whole as they can, by which means the worms get entangled in it; and as it is also purgative, they are swept through the intestines, and thus evacuated. Cows, calves, and sometimes horses, will lick chalk and dirt, chickens pick lime from walls, to conquer a redundant acid in the stomach, &c. And we

Hard to be traced.

2. In reality, as it would be difficult to assign the first inventor of houses and cloathing, for a defence against the injuries of the weather, so the origin of physic can no more be discovered than the head of the Nile; notwithstanding that this art, as well as some others, must have always subsisted, though it has been cultivated more or less according to the dispositions of different countries and ages.

Its ancient and modern improvers.

3. The performances of the ancients in this science, and chiefly of Hippocrates, are well known; their works containing the most considerable part of the curative branch; *and the fol-*

may naturally conclude that man, subject from the nature of his machine to different uneasy affections, would of course at first, by some similar means, instinctively seek redress; but being moreover endowed with a rational principle, and a disposition inquisitive, would carry his inquiries still farther, and endeavour to investigate causes, and acquire, as far as he could, some modes that might render him more certain in his applications. Thus would he from time to time collect remedies useful to himself in a variety of complaints; and hence every man at first was his own physician; in his own power was thus far the attainment of medical knowledge, which would to one another be naturally communicated. And it is not improbable, but the first who was considered as practising the healing art for the benefit of mankind, was one only who had made the most copious collection of remedies; and the great utility experienced from them awakened the attention of philosophers, who, conscious of the good purposes flowing from this source, began to cultivate it as one of the sciences, and many to this branch so closely devoted themselves, that they spent their lives in the pursuit, and became philosophic physicians. Thus we find, from the necessity of mankind, it is probable, physic had its origin almost at as early a period as man himself; and, from its consequence, arose to one of the most useful and noble arts; and is now, from its utility, universally cultivated, and established on a firm and lasting basis. *W.*

lowing

lowing ages* have produced some eminent men, who have spared no pains to extend its limits by a close application to either anatomy, pharmacy, or practice, not to mention those of our own age and nation, whose endeavours in all the sciences that tend to improve this art, deserve the praises of an abler pen.

4. But how considerable soever their attempts have been, I should always have esteemed myself an useless member of society, had I not contributed my mite towards the improvement of physic; and upon this account, after long deliberation, and many years close and faithful observation, I resolved (1.) to communicate my thoughts relating to the manner of making farther advances in physic; and (2.) to publish a specimen of my endeavours in this way.

The endeavours of the author.

* *And the following ages.* Great as have been the improvements in physic, it has been assigned as a reason why they have not been more extensive and perfect, that succeeding ages have deviated too much from reason and experience, the two only masters which in this science ought to be pursued, and wandered in the dark labyrinths of hypothetical conceit. Formerly there might have been some foundation for this accusation; but at present the charge is inadmissible and ill founded; for most of our medical works which lay claim to modern attention, are recitals of cases, with the methods adopted to complete the cures; but it is to be lamented, that too many of them are vague, and not described with sufficient accuracy; neither minutely descriptive enough, nor declaratory of the constitutional or other circumstances with which they are combined;—for in all these the slightest symptoms *preceding* or *concomitant* should be mentioned; the *age, sex, and constitution*, with its peculiarities, as far as they are discoverable; the *states of the atmosphere, mode of life, situation, climate, and disposition*, should be considered as well as the disease; for variations in these particulars have very often great influence on the machine, and assist in producing the complaint, rendering it mild or violent; and contributing to favour one mode of cure in preference to another. *W.*

The ways of
improving
physic.

5. *The improvement of physick,** in my opinion, depends (1.) upon collecting a genuine and natural description or history of all diseases as can be procured; and (2.) laying down a fixed and complete method of cure. It is easy enough to describe diseases unskilfully, but to write such a full and accurate history of them as to escape the censure that Lord Bacon has passed upon some great promisers in another way, is a much more difficult task: “*We are not to learn,*” says the noble author, “*that we have a voluminous*” “*natural history, which is agreeable to the variety*” “*of its matter, and, by the pains bestowed upon*” “*it, rendered curious and entertaining in many*

* *The improvement of physick, &c.* The history of diseases, says Baglivi, or the *medicina prima*, ought to be distinguished from the curative part, or the *medicina secunda*; the former is a science *sui generis*, and is only to be drawn from the pure and uncorrupted springs of nature; or, to speak more properly, depends upon a plain and accurate description of distempers, as they appear in their beginning, height, increase, declension, and termination, to the diligent and judicious observer. The *medicina secunda*, or the curative branch of the art, may, I confess, be much improved by an application to other sciences, especially to those that have any relation to physick, or may be considered as branches thereof, amongst which chemistry, botany, the knowledge of the six non-naturals, experimental philosophy, anatomy, and the like, may be enumerated, which eminently contribute towards the perfection of the method, and the deriving the curative indications from every the least circumstance. *Baglivi Opera*, pag. 14, 15.

Besides these things here laid down, I see no reason why known causes are to be neglected; for certainly they will furnish us with information, sooner than any other means, capable of leading more directly to the mode of cure; for the immediate cause removed, its effect ceases; nor should those which are more remote be inattentively passed by, as from our knowledge in this point we may very often be empowered to prevent diseases their natural consequences, or stop their progress. *W.*

“*places;*

“ places; but if it were stript of its fables, quotations, trifling disputes, philology, and other ornaments, that are fitter for the conversation of learned men at their hours of relaxation, than for institutes of philosophy, the matter of it would be brought into a narrow compass. Such a history falls far short of our design.” And thus the cure of diseases is easily delivered according to the common method; but to do it in a masterly, scientific manner will appear a much harder task to those who know that there are abundance of distempers to be met with in practical writers, that were and still continue incurable.

6. But with regard to the history of diseases, whoever considers the undertaking deliberately, will easily perceive that the author must attend to several more particulars than are ordinarily minded; a few of which I shall mention at present.

The history of diseases a work of difficulty.

7. (1.) All diseases, then, ought to be reduced to certain and determinate kinds, with the same exactness as we see it done by botanic writers in their treatises of plants. For there are diseases that come under the same genus, bear the same name, and have some symptoms in common, which, notwithstanding, being of a different nature, require a different treatment.— Thus it is generally known, that the word *carduus* is applied to several kinds of herbs, and yet a botanist would be guilty of inaccuracy, who should content himself with giving a general description of the plant, and enumerating the marks wherein it differs from all others, and in the mean time take no notice of the peculiar characteristics of every species, which distinguish them

Diseases to be reduced to certain kinds.

them from one another. In like manner, it is not enough for a writer to give us only the common signs or appearances of any disease; for though the same variety does not happen in all distempers, yet I hope to make it plainly appear, in the following sheets, that there are several, which, notwithstanding their being treated of by authors under the same name, without any distinction of kind, are extremely different.

But not to
support any
hypothesis.

8. Furthermore, where we meet with this distribution of distempers into kinds, it is commonly done to serve some hypothesis founded upon the true phenomena; and thence this distinction is rather adapted to the bent of the author, and his manner of philosophising, than to the nature of the disorder. How much the improvement of physic has been obstructed by this erroneous procedure appears in not a few diseases, the cure of which would not have been undiscovered at this day, if the benevolent writers of experiments and observations had not been deceived by taking one disease for another. And to this cause I esteem it owing, that the *materia medica* is so immensely enlarged, and yet with little advantage to the diseased.

No hypo-
thesis to be
used in writ-
ting a history
of diseases.

9. (2.) *In writing, therefore, a history of diseases,** every philosophical hypothesis which hath pre-
possessed

* *In writing, therefore, a history of diseases, &c.* This advice deserves the strictest attention; as CELSUS himself at that early period in which he wrote, when speaking of medicine, says, "Obscuris omnibus, non à cogitatione artificis, sed ab arte ipsa rejectis,"—All things obscure should not only be rejected from the consideration of the practitioner, but banished from the art itself—And this is certainly highly proper; for whenever hypotheses, those
children

possessed the writer in its favour, ought to be totally laid aside, and then the manifest and natural phenomena of diseases, however minute, must be noted with the utmost accuracy, imitating in this the great exactness of painters, who in their pictures copy the smallest spots or moles in the originals; for it is difficult to give a detail of the numerous errors that spring from hypothesis, whilst writers, misled by false appearances, assign such phenomena for diseases, as never existed but in their own brains; whereas they ought to appear clearly, if the truth of their favourite hypothesis, which they esteem incontestable, were well established. Again, if any symptom, properly suiting their hypothesis, does in reality belong to the disease they are

children of ostentation and fertile invention, are started, and accompany medical histories, we invariably find such histories calculated to answer in support of the causes and effects being produced from those imaginary principles laid down as positive facts, which, when experimentally examined, prove to be fallacious. The mischief from hence arising is obvious. For physic has from these sources been extremely retarded in its progress, and would ever have been prevented from attaining any degree of perfection. If men's ingenuity had continued to be employed in supporting hypothetical data, rather than investigating truth, as on these occasions they are merely pursuing an ignis fatuus, which will consequently lead them into error; and however ingenious or plausible may be their pretext, the result of all their inquiries will be deceptive; and I cannot avoid being of the same opinion with Bp. Brown, "That there never will be any great and considerable advances made in the art of healing, till all hypotheses and mechanical reasoning are out of vogue, and till men are come about again to the ancient method of pure experiment, and the common obvious reasoning from thence." That period seems to be advancing very fast; for medicine never stood upon a more firm basis, nor ever was supported on more rational principles than at this day. *W.*

about

about to describe, they lay too much stress upon it, as if nothing more was wanting to confirm it; whereas, on the contrary, if it does not agree with their hypothesis, their manner is, either to take no notice at all of it, or but barely to mention it, unless they can, by means of some philosophical subtilty, adjust it thereto, and bring it in some measure to answer their end.

The proper and accidental symptoms to be particularized in describing a disease.

10. (3.) *Again, in describing any disease it is necessary to enumerate both the peculiar and constant phenomena or symptoms,* and the accidental ones separately; of which latter kind are those which*

* *In describing any disease it is necessary to enumerate, &c. Hippocrates, by closely attending to observation, discovered that diseases have certain constant and individual symptoms, and others that are adventitious or casual, and common to other distempers, and that the former depend upon the identical and constant nature of the disease, and the latter, upon the different treatment of the patient, or the numerous and always various assemblage of causes. The first he formed into aphorisms, as the rules of the art, and left the latter to the judgement of the physician.*

The constant symptoms, which may be called the characteristic signs of diseases, sometimes strike the senses and sometimes lie concealed, and cannot be accounted for in a probable way; and nevertheless, whatever they are, they ought not to be overlooked by the physician, but should be faithfully noted, just as they appear. For as the curative indications are taken from every the least circumstance, so the least motions of diseases, though somewhat obscure, are to be investigated and described; by which means we shall not only be furnished with a complete history of distempers, but a method of cure likewise, which is still more valuable. To the obscure motions of diseases may be referred the critical days, the secret changes of diseases amongst themselves, their translation to one part rather than another, the latent mutual consent of the parts, the periods of diseases, and their increase at set hours, which happens in some kinds of pains, in fevers also, and several other disorders. *Raglini Opera, pag. 6, 7.*

differ

differs occasionally by reason of the age and constitution of the patient, and the different method of cure. For the appearance or aspect of a disorder often varies according to the different method of cure, some symptoms being rather occasioned by the physician than the disorder itself; so that persons labouring under the same illness being differently treated, have different symptoms. And hence, unless great caution be used in this point, our notions of the symptoms of diseases must necessarily be very loose and uncertain; not to mention that uncommon cases do not more properly belong to the history of diseases than the biting of the palmer worm, in describing *sage*, is to be reckoned amongst the characteristic marks of that plant.

II. (4.) Lastly, the seasons of the year that principally promote any particular kind of diseases, are to be carefully remarked. I own that some happen indiscriminately at any time; whilst many others, by a secret tendency of nature, follow the seasons of the year with as much certainty, as some birds and plants. And indeed I have often wondered, that this tendency of some distempers, which is very obvious, has been hitherto observed but by few; whereas abundance of persons have, with great exactness, noted under what planet, plants spring and brutes ingender. But from what cause soever this inadvertency proceeds, certain it is, that a knowledge of the seasons in which diseases ordinarily arise, is of great use to a physician towards discovering the species of the disease, as well as the method of curing it; and that the consequence of slighting this piece of knowledge is ill success in both.

The seasons of the year to be carefully noted.

12. These

The usefulness of a history of diseases to practice.

12. *These are some of the most remarkable, though not the only particulars to be observed in writing a history of diseases;** the usefulness of which to practice is not to be conceived, and in comparison whereof the subtile inquiries and trifling notions with which the writings of the moderns abound are of no sort of value. For is there a shorter, or indeed any other way of coming at the morbid causes we are to encounter, or of discovering the curative indications, than by a certain and distinct perception of the peculiar symptoms? Even the smallest circumstance is of use to both these purposes: for, allowing that some variety happens from the constitution of particular persons and the method of cure, yet nature notwithstanding acts in that orderly and equable manner in producing distempers, that the same disease appears attended with the like symptoms in different subjects; so that those which were observed in Socrates, in his illness, may generally be applied to any other person afflicted with the same disease, in the same manner as the general marks of plants justly run through the same plants of every kind. Thus, for instance, whoever describes a violet exactly as to its colour, taste, smell, form, and other properties, will find the description agree, in

* *These are some of the most remarkable, &c.* Nothing eminent can be done in the prognostic, and especially in the curative part of physic, without an accurate and circumstantial history of diseases; for how is it possible to foretel what will happen in a distemper, and proceed properly in the cure, if we are ignorant of the constant and fortuitous symptoms attending it, and the general progress of it from the beginning to the end, when nothing intervenes to obstruct its ordinary course, whether from mismanagement, accident, or otherwise?

most

most particulars, with all the violets in the universe.

13. *And, in truth, it is my opinion,** that the principal reason of our being yet destitute of an accurate history of diseases, proceeds from a general supposition, that diseases are no more than the confused and irregular operations of disordered and debilitated nature, and consequently that it is a fruitless labour to endeavour to give a just detail of them.

Why we yet want an accurate history of diseases.

14. But to resume our subject: *A physician may likewise collect the indications of cure from the smallest circumstances of the distemper †* as certainly

The curative indications to be gathered from the smallest circumstances.

* *And, in truth, it is my opinion, &c.* This position is clearly erroneous, for disease can never be considered “as the confused and irregular operations of disordered and debilitated nature;” for nature always acts with uniformity and consistency, when left to herself; nor does she ever err but when obstructed by some means or other, which in disease is always the case; and this morbid affection is nothing more than a defect in, or a præternatural or supernatural affection of some part or parts of the human machine, those instruments upon which nature is ordained to act, as will be more clearly shewn hereafter. So that if we are conversant with the healthful state of these instruments, we shall readily discover when they perform their functions imperfectly, and be enabled to trace their defects, and give clear, minute, and particular accounts of the attendant symptoms and appearances. *W.*

† *A physician may likewise collect the indications of cure, &c.* The curative indications in distempers cannot be more certainly derived, than from the most threatening and prevailing symptoms, which chiefly manifest the nature and violence of the disease. If therefore, for want of noting and duly considering all circumstances, and especially overlooking the effects of all that is given or applied to the patient, we mistake, in the indications of cure, we must needs go wrong, and do mischief.

The forming just indications, then, being a matter of the highest importance, we ought to make use of all the helps

as he does the distinguishing signs from them; and for this reason I have often thought, that if I had a just history of any disease, I should never be at a loss to apply a suitable remedy to it: its different phenomena or symptoms manifestly shewing the way to be followed, and being carefully compared together, would lead us, as it were by the hand, to those obvious indications that are gathered from a thorough insight into nature, and not from the errors of imagination.

What made
Hippocrates
so excellent
a physician.

15. *By these steps and helps the father of physic, the never enough extolled Hippocrates,* came to excel*

helps we can procure in order thereto, by attending to every thing that falls under the notice of the senses, the procedure of nature from the beginning of the illness to the time we are called, the strength of the patient at this time, the cause of the disease, the season of the year, the then reigning distempers, the sex, age, and constitution of the patient, &c.; all which particulars being maturely considered and compared, will certainly direct us to the genuine curative indications, whence we may hope to succeed in the cure, or at least to secure our reputation by making the danger known, and foretelling the fatal consequence that is likely to ensue.

* *By these steps and helps the father of physic, &c.* Whoever will be at the pains of perusing the writings of Hippocrates with due attention, will find him justly entitled to the eminent character he has enjoyed for so many ages, and is likely to preserve to latest time. We meet with manifest proofs there of his being possessed in an extraordinary degree of the most essential qualifications of a physician; a more than common attention in observing all the different phenomena of diseases, and a profound judgement to apply in the fittest manner to practice.

He remarked with surprising exactness all that preceded distempers, the symptoms that accompanied them, and what did good or hurt upon every occasion. And indeed his steady and close application to acquire this truly useful part of medical knowledge, which he justly held in the highest

excel in his profession, who, after laying down this solid and unshaken foundation to build the art upon, has clearly delivered the symptoms of every disease, without calling in any hypothesis to his aid, as appears in his books concerning *diseases*, &c. He has likewise left us some rules drawn from the observance of nature's method of promoting and removing distempers; such are his *prognostics*, *aphorisms*, and other writings of this kind. Of these particulars the theory of this eminently judicious physician chiefly consisted, which not being deduced from the trifling fallies of a wanton imagination, like the dreams of distempered persons, exhibited a genuine history of the operations of nature in the diseases of mankind. Now his theory being no more than an exact description of nature, it was highly rea-

highest esteem, left him neither inclination nor leisure to prosecute inquiries of less consequence with diligence enough to make any considerable progress therein. He greatly improved the art by being at the pains of collecting a larger number of observations, in order to discover the issue of distempers, as to life or death, and to be able to foretell what would happen in all the cases that came under his care: and he made so extraordinary a proficiency in this branch of the art, that his writings contain the best set of prognostics, that are to be met with in any writer at this day. Upon inquiry I fear it will be found, that most have copied from him in this point, and few added any thing to his discoveries.

It is on all hands allowed that he found physic in a very confused and imperfect state, and left it much mended both in point of method and certainty. Whence he has been all along respected as the restorer and founder of the art.

Thus far Dr. SWAN—but we must beg leave to observe, that HIPPOCRATES cannot be said either to be the restorer or founder. The art was not lost, but cultivated by the philosophers, amongst the other branches of science; he is allowed to be the first who separated it from the rest, and may truly merit to be stiled the great Improver of Medicine. W.

sonable that he should aim in his practice only at relieving diseased nature by all the means he could employ; and hence, likewise, he required no more of art, than to assist nature when she languished, and to check her when her efforts were too violent; and to accomplish both these ends by the steps and method whereby she endeavours to expel the disorder: for this sagacious observer found that nature alone terminates distempers, and works a cure with the assistance of a few simple medicines, and sometimes even without any medicines at all.

Physick
further im-
proveable by
delivering a
complete
method of
cure.

16. (2.) *The other method of improving physick** farther consists chiefly, in my opinion, in delivering a fixed and every way complete method of cure; such a one, I mean, as hath been sufficiently established and verified by a competent number of experiments, and found effectual to cure any particular disease. For I conceive it not enough to publish the particular success of any method or medicine, if neither are generally found to answer the end in all cases, at least in the same given circumstances. But I maintain

* *The other method of improving, &c.* Dr. SWAN thinks such a mode of cure might be established in most distempers. I fear these expectations are more sanguine than certain. It might probably be the case, were all constitutions similar; but when we consider the vast variety of peculiarities in each; the great difference in many; the multiplicity of circumstances which create many deviations; we shall be apt to dissent from this opinion, particularly if we add our ignorance in numbers of the nature of the offending cause. Thus circumstanced, we labour rather to guard the constitution against the ill effects produced by the morbid cause, and suffer it to be thrown out of the habit with as little molestation as possible; and hence we are obliged to vary our modes according to the constitutional defect of our patients, rather than attempt a subduction of the offending matter within the habit. *W.*

that

that we ought to be as certainly assured that a particular disease may be conquered by answering a certain indication, as we are of answering a particular indication by some certain medicine ; that will generally, though not always, produce the desired effect : thus, for instance, we purge with *sena*, and cause sleep with *poppies*. However, I do not deny but that the physician ought to attend carefully to the particular effects both of the method and medicine he uses in curing diseases, and to set them down for the ease of his memory, as well as the improvement of his knowledge ; so that at length, after many years experience, he may fix upon such a method of curing any particular disease, as he need not in the least depart from.

17. *But the publishing particular observations is not so useful,** in my opinion ; for if the observer only The inutility of publishing particular observations.

* *But the publishing particular observations is not so useful, &c.* The author here should seem not to have sufficiently attended to the advantages derivable from faithful and accurate observations, which are the principal foundation of the pathological and curative branches of physic. For experience, the soul of the art, is the result of a number of such observations made by ourselves and others, and physic is much more indebted to them for its improvement, than to all the discoveries that have ever been made in the art, and all the hypotheses that have been invented with this specious design ; many things happening daily in the course of distempers, which, being exactly noted, greatly contribute to direct us in the like cases, though it may be they cannot be accounted for in a satisfactory manner. But to render them truly useful, I confess they should be wrote with much more exactness than they generally are, and no circumstances of any moment omitted from the beginning to the ending of the distemper, as well relating to the course thereof, as the method of cure employed, setting down the medicines that were exhibited from day to day, and the effects they had,

only intends to inform us that a particular disease hath yielded once, or oftener, to such a medicine; of what advantage is it to me that a single medicine, which I knew not before, is added to the immense stock of eminent medicines, that we have long been pestered with? But if, laying aside all other medicines, I should use only this, ought not its virtues to be approved by numerous experiments? And are there not also numberless other circumstances, relating both to the patient and the method of cure, to be considered before any advantage can be reaped from a single observation? If the medicine never fails, why does the observer deal only in particulars, unless he either distrusts his experience, or desires rather to impose upon the public in part, than in the whole? But how easy a task it is to write large volumes of this kind can be no secret to one that is but little acquainted with practice; as, on the contrary, how difficult it is to lay down a

and specifying likewise the diet, regimen, &c. in a very particular manner. Many of the observations delivered both by the ancients and moderns labour under great defects, and are so far from being complete, or the things we mean, that they do not deserve the name of observations, but ought rather to be intitled fragments of observations, and of course are of little or no use to guide the practical physician in the true method of cure. For, as Dr. COTTON very justly observes, after the pain of turning over a variety of volumes, we still find that the particular case we wanted, is either not mentioned at all, or too partially and superficially to serve our purpose.

So that it is in medicine as in navigation. Rules may be laid down, and charts exhibited; but when a man hath made himself master of all these, he will often find himself among shelves and quicksands; and must at last have recourse to his own natural sagacity, to extricate himself out of these difficulties.—*Letter to Dr. Mead on a particular kind of scarlet fever, &c.* p. 21.

perfect,

perfect, and every way complete method of cure in any disease. If only one person in every age had treated but a single disease in this manner, physic would have been brought to as much perfection many years ago, as the condition of mankind will admit. But our misfortune proceeds from our having long since forsook our skilful guide *Hippocrates*, and the ancient method of cure founded upon the knowledge of conjunct causes, that plainly appear: infomuch that the art which is at this day practised, being invented by superficial reasoners, is rather the art of *talk- ing* than of healing. But that I may not seem to advance this assertion without sufficient grounds, I beg leave to make a short digression from the subject, in order to prove *that the discovering and assigning of remote causes,** which en-

Remote causes not to be discovered.

* *That the discovering and assigning remote causes, &c.*— Though a perfect knowledge of the immediate and conjunct causes ought in all cases, where possible to be acquired, as it will amply repay the practitioner for his assiduity; still there appears no sufficient reason for the neglect in searching after the more remote; for these once known would assist in leading us into the proximate sources from whence diseases deduce their origin very often with more certainty, and put it in our power to be extremely useful in preventing the effects from thence arising. Though if, according to *SYDENHAM*, this discovery is an impossible attempt, as he supposes them to lie without the reach of man's comprehension, the labour would be fruitless, and mere waste of time. Still the impossibility seems not to be clearly proved; and till that is made apparent, the pursuit ought not to be relinquished; for though in all cases the knowledge may not be attainable, yet wherever it is discoverable, obvious advantages will arise: and as a minute detail of trivial effects in medical descriptions is allowed to be material, so also may accurate investigations of distant causes, as all knowledge however small appertaining to any subject has its utility. *W.*

gross the thoughts, and feed the vanity of curious inquirers, is an impossible attempt, and that only immediate and conjunct causes fall within the compass of our knowledge, and that from these alone the curative indications are to be taken.

Reasons to
prove this
assertion.

18. Accordingly, it must be observed, that if the humours are retained in the body beyond the due time, either (1.) because nature cannot digest and afterwards expel them, or (2.) from their having contracted a morbid taint from a particular constitution of the air, or (3.) lastly, from their being infected with some poison: by these, I say, and the like causes, *these humours are worked up into a substantial form, or species,** that discovers itself by particular symptoms, agreeable to its peculiar essence; and these symptoms, notwithstanding they may, for want of attention, seem to arise either from the nature of the part in which the humour is lodged, or from the humour itself before it assumed this species, are in reality disorders that proceed from the essence of the species, newly raised to this pitch: so that every specific disease arises from some specific exaltation, or peculiar quality of some humour contained in a living body. Under this kind may be comprehended most diseases, which have a certain form or appearance; nature in fact observing the same uniform method in producing and bringing diseases to a height or *cri-*

* *These humours are worked up into a substantial form, or species, &c.* Or, in plainer language, the humours undergo such a change from some one of these causes, just mentioned, as to occasion a distemper, attended with the peculiar symptoms proceeding from this change, and agreeable to the nature of the distemper hereby formed.

sis, as she does in the production or growth of plants or animals. For as every plant or animal is possessed of peculiar properties, so is it likewise in every exaltation of any humour after its being come to a species, or disease. We have a clear proof of this every day in those kinds of excrescences that grow on trees and shrubs (occasioned by the ill quality of the nutritious juice, or other causes) in the form of moss, mistletoe, mushrooms, and the like; all which are manifestly different essences, or species, from the tree or shrub that bears them.

19. In reality, whoever diligently and accurately considers the phenomena, or symptoms, accompanying a *quartan fever*, viz that it mostly comes towards *autumn*, and keeps a certain course, or appearance, the fits, or periodical revolutions of it, returning as certainly every fourth day, as a clock renews its rounds, unless this regular course be interrupted by some external agent; that it begins with a shivering, and a great sense of cold, which are succeeded by as sensible a degree of heat, which terminates at length in a profuse sweat; and lastly, that whoever is seized with this disorder, is seldom cured before the *vernal equinox*: I say, whoever duly considers these particulars, will find as strong reasons to believe that this distemper is a species, as a plant is one, which in like manner springs out of the earth, flowers, and dies, and is in other respects affected agreeable to its nature or essence. For it is not easy to comprehend why this disease should arise from a combination of principles and manifest qualities, whilst a plant is on all hands allowed to be a substance and distinct species in nature. However, in the mean time,

Farther
proved by a
quartan
fever.

we do not deny but that as most kinds of animals or plants subsist of themselves, so, on the contrary, the species of distempers depend on those humours that produce them.

Diseases
curable,
though their
remote
causes can-
not be dis-
covered.

20. But though, from what has been delivered, the causes of most diseases should seem absolutely undiscoverable; yet the question, *how they may be cured*, may be answered, inasmuch as we speak here only of their remote causes. Now it is easy to observe, that the curious inquirers into these causes lose their labour, whilst they endeavour, in spite of nature, to investigate and bring them to view, and yet overlook the immediate and conjunct causes that are at hand, which must necessarily and may be discovered without such trifling helps, inasmuch as they disclose themselves to the understanding, fall under the notice of the senses, or may be learnt from the anatomical observations of our predecessors. And as it is manifestly impossible a physician should discover those causes that have not the least correspondence with the senses, so neither is it necessary: it is sufficient for him to learn the immediate causes, and those effects and symptoms of a distemper that may enable him to distinguish accurately between this and another similar disease. Thus, for example, in a *Pleurisy*, it is a *fruitless labour to search into the ill quality and broken texture of the blood*,* whence this disease originally proceeds, which are not to be comprehended; but whoever perfectly

* *In a pleurisy it is fruitless labour, &c.* This example is fallacious, for all pleurisies arise not from the ill quality, and broken texture of the blood, which will be shewn when we come to speak of that disease. *W.*

understands the immediate cause thereof, and can distinguish it from all other distempers, will cure it as certainly, though he neglects the useless and trifling search after remote causes—But this by way of digression.

21. But if any one were to ask whether, besides the two foregoing *desiderata* in physic, viz. Specifics wanting to, towards the farther improvement of physic. (1.) a true history of diseases, and (2.) a certain and established method of cure, a third should not be added, namely, *the discovery of specific remedies*?* I answer in the affirmative, and proceed

* *The discovery of specific remedies, &c.* This, it is to be feared, would be labour in vain, for it is a doubt whether any such exist in nature. The idea seems to have originated more from man's ignorance than conviction. This will strike us more forcibly, when we reflect that during the whole series of time that medicine has existed, according to our author's account, who is a favourer of this notion, there has not been above one discovered possessed of these indescribable powers, notwithstanding such discoveries have been the labour of all ages. How peculiarly unfortunate must mankind have been in their researches? Yet even at this day we hear men talk with confidence of specific remedies, and tell us that all such are to be considered of that class which cure certain diseases by means undiscoverable. But this defect of perception depends more on the want of sagacity in the practitioner to discover the mode, than the mysterious subtlety of medicinal action.

BAGLIVI defines a specific—"A medicine possessed of such peculiar virtues as *infallibly* to relieve or cure the particular disorder for which it is used; being exhibited as nearly as can be in the same given circumstances."

But specifics have been considered of two kinds: first, Such as were specific to a certain part of the system; second, To particular diseases.

The first division, says Dr. CULLEN, has been carried to great excess, as there is scarce a part of the system which has not had a medicine adapted to it; but at first sight this division must appear false, as there is no disease of any particular part that is not common to any other part of the system.

Of

proceed to do my part towards it. For though that seems to be the best method of curing acute diseases,

Of this division he then mentions the terms, *a capite ad calcem*; and begins with

1. **CEPHALICS**.—By these are meant such medicines as are suited to diseases of the head; but these are very various, and often opposite in their nature. By this term writers mean generally certain substances, which by an agreeable odour and fragrancy were grateful to the nerves at their origin in the head. If this were the case, the term might be admitted, but little virtue depends upon their odour, and all those remarkable for this odour are stimulants.

A term synonymous to cephalic is,

2. **NERVOUS**—but this is still more ambiguous and extensive in its signification, as comprehending medicines suited to all nervous diseases, *e. g.* stimulants, sedatives, anti-spasmodics.

3. **OPHTHALMICS** are medicines supposed to act specifically in diseases of the eyes, but as medicines good for diseases of the eyes, are equally efficacious for the same disorders in any other part of the body, this term has no proper meaning.

4. **PECTORALS, THORACICS, PULMONICS, PNEUMONICS**, are all terms applied to medicines suited to diseases in the breast, but not one of them has a specific virtue; for those medicines which increase the bronchial mucus, will also promote the secretion of mucus in any other parts of the body. But writers in general mean, all those which will promote and correct the bronchial mucus, two very opposite effects, and therefore the terms are confounding.

5. **CARDIACS**.—Cordials act in general on the nervous system, and not specifically on the heart.

6. **STOMACHICA**.—Many of these medicines excite appetite and promote digestion; but they are of such different kinds, and to be used in such different circumstances, that no such term ought to be admitted: with regard to the other abdominal viscera, the terms are applied with even less propriety than in the former.

7. **HEPATIC**.—This term seems to have no meaning at all, as we cannot conceive any medicine has a specific operation on the liver preferable to any other part of the system. If any medicine more directly promoted secretion of bile, it might be called hepatic. Some such indeed have been

diseases, which, after nature has pitched upon a certain kind of evacuation, assists her in promoting

been supposed, but Dr. CULLEN declares himself unacquainted with them.

8. SPLENETICS.—This is still more improper than the former.

9. NEPHRITICS.—It is possible there may be medicines which act more directly on the kidneys, but it is only in so far as they are diuretics. Nephritics are appropriated to diseases of the kidneys, but they are here the same with demulcents, as they act by defending the kidney from the acrimony of the urine, and sharp points of the gravel. Nephritics have not only been supposed to act as diuretics, but also to push out, and even dissolve sand or gravel; but we know none of this kind, but such as are diuretic.

10. UTERINES.—This term is equally exceptionable with any of the former, for it is even a doubt if the menagogæ act directly on the uterus.

11. APHRODISIACA.—Medicines which act on the genitals, and stimulate to venery. This is considered as a false indication, for we know no medicines which do this by their immediate action on those organs: cantharides have been supposed to be of this kind; but they act only by being received into the blood, and stimulating the bladder, and so communicating their effects to the organs of generation. There are other aphrodisiacs, which are supposed to increase the seminal turgescentcy; but these are imaginary, for we know none but nutrients, which by being long detained in the system, distend all the vessels, and the seminal vesicles also.

12. ANTIPHRODISIACS.—This is a mere unmeaning indication.

With regard to the consideration of specifics, adapted to particular diseases, he says,

Many, dissatisfied with the reasonings of dogmatic physicians, have been led into the pursuit of specifics: if this could be done with success, it would certainly be very desirable; but at this day I know of no medicine whose action I do not think I can explain by its answering a particular indication; which entirely destroys the notion of a specific.—I shall content myself with barely enumerating the terms of such supposed specifics, what we have already said superseding a farther explanation.

ing it, and so necessarily contributes to cure the distemper; it is nevertheless to be wished that the cure might be shortened by means of *specifics* (if any such medicines can be discovered) and, which is of more importance, that the patient might be preserved from the evils which are the consequence of those errors that nature often unwillingly makes in expelling the cause, even though she is assisted in the most effectual and skilful manner by the physician.

22. As to the cure of *chronic diseases*, though I believe that more advantage may be expected from the use of a *method* only, than can be conceived at first, yet it is plain that this is wanted in the cure of some of the most considerable distempers of this kind, which happens chiefly for this reason, that nature is not possessed of so effectual a method of expelling the morbid matter in *chronic* as in *acute* diseases, which might enable us to conquer the distemper, by assisting her, and aiming at the true end. In eradicating a *chronic* disease, therefore, whoever is possessed of a me-

Anti-epileptica, anti-maniaca, anti-melancholica, anti-hypochondriaca, anti-catarrhalia, anti-phthisica, anti-hectica, anti-cachectica, anti-dysenterica, anti-icterica, anti-strumatica, anti-scorbutica, anti-podagrica, anti-venerea, anti-febrilia.— (See CULLEN'S *Materia Medica*, 4to. London, 1772.)

This subject is here treated rather fully, as I think in practice the idea of *specifics* should be rejected; because it may retard the progress of a cure by trifling; owing to too great a dependence on their imaginary efficacy; though the search after them may not be totally useless, as many beneficial discoveries may be the result; similar to the alchemical pursuits for attaining the philosopher's stone, or an universal remedy; which, though the *quæ desiderata* were never yet acquired, yet unthought of productions, pregnant with use in the practice of physic, have been brought forward. *W.*

dicine,

dicine, powerful enough to destroy the species of it, justly deserves the appellation of a physician; to which he has no right, who only introduces a new one from the first and second qualities, instead of the former, which may indeed be done without abolishing the species. Thus, for instance, a person that has the *'gout* may be heated or cooled without curing the distemper; specific diseases being not more immediately cured by that method, which is only introductive of different qualities, than fire is extinguished by a sword. For, pray, what does heat, cold, moisture, dryness, or any of the second qualities contribute towards the cure of a distemper, the essence of which consists in none of these?

23. But if it be objected, that we have long been possessed of a sufficient number of *specifics*, I answer, that the contrary will soon appear, provided a strict search be made into this particular: the *Peruvian* bark being the only one we have. For there is a wide difference between medicines that *specifically* answer some certain curative indication, which being effectually performed, perfects the cure, and those that *specifically* and immediately cure a disease, without regarding any particular intention, or curative indication. To exemplify this; *mercury* and *sarsaparilla* are usually reckoned specifics in the venereal disease, though they ought not to be deemed proper and immediate specifics, unless it could be demonstrated by undeniable instances, that *mercury* had cured the patient without causing a *salivation*, and *sarsaparilla* without raising a *sweat*. For other diseases are cured in the same way by other evacuations, and nevertheless the medicines exhibited for this purpose do

There are fewer specifics than are imagined.

do more immediately contribute to the cure of the diseases that yield to those evacuations, which these medicines are principally designed to promote, than a lancet does towards the cure of a *pleurisy*; which no body, I imagine, will call a specific in this disorder.

More might be discovered by taking due pains.

A misfortune that the virtues of plants are not better known.

24. Specific medicines, therefore, considered in our limited sense of them here delivered, fall not to every man's share, and seldom to theirs who take no pains to discover them; and yet I doubt not but out of the overflowing fulness wherewith nature, by the appointment of our most liberal Creator, abounds for the preservation of the whole race of mankind, provision is likewise made for the cure of the principal diseases which afflict them, and that by such medicines as are within reach, and the produce of every climate. It is indeed pity that we are no better acquainted with the virtues of plants, which I esteem the best part of the *materia medica*, and most likely to afford such medicines as we have just treated of.* For the parts of animals

* *To afford such medicines as we have treated of, &c—* Whatever may have been the expectations of our author with respect to discovering specific remedies in the vegetable world, time and repeated experiments have proved that success is not to be hoped for in this point; but hath nevertheless shewn, that plants and simples are highly useful, and many of them extremely powerful; and as they are safer and less fallacious than the more compound medicines, claim pre-eminence: besides the advantage of having them administered in substance, or requiring a few easy operations to adapt them to different purposes; add to these, they are less liable to adulteration, nor likely to be spoiled by the ignorance of unskilful operators. On these considerations certainly the more simple medicines are the best, and those which are procured at the easiest expence; for here is no room left for the infamous practices of trading chemists, who

imals should seem to resemble the human body too nearly, and minerals to differ too much from it; and hence it is, I ingenuously own, that minerals more effectually answer indications, than medicines prepared from animals or plants do, but yet not specifically, in the sense and manner above-mentioned. For, my own part, I can only say that I have spent some years in researches of this kind, yet without succeeding well enough to encourage me to communicate the result of my inquiries.

25. But though I like plants best, yet I would not decry those excellent medicines, the productions of a different kingdom, that have been discovered by the application of our predecessors or cotemporaries, and found to answer the curative indications effectually. Amongst these *Dr. Goddard's drops** claim the first notice, which are prepared by *Dr. Goodall*; I prefer them to all other volatile spirits, on account of their efficacy and virtue in answering the purposes for which they are given.

Other excellent medicines besides plants.

26. To conclude: Having engaged myself in this preface, to publish a specimen of my la-

The author publishes a history of acute diseases.

who care not what frauds they commit in compounding; who regard not the fatal consequences attendant on their infamous practices: abuses of this kind call loudly for reformation; nor should the consideration be below the dignity of legislative authority. For why should the common robber be dragged to the gallows, and suffer an ignominious death due to his offences, and the chemist, who often adds murder to his plunder, be permitted to live with impunity. *W.*

* *Dr. Goddard's drops, &c.*—The medicine that goes under this name is an highly volatile oleous alkaline spirit, drawn from dead silk worms and their remains, and extolled for giving relief in convulsions from acidities, or worms: but the present practice takes no notice of it.

bours

bours for the improvement of phyfic, I will now endeavour to fulfil my promise, by presenting the public with the history and cure of acute *diseases*. And though in executing this design, I am sensible I shall expose all the fruit of my labours, for the best part of my life, to the indolent and ignorant, yet I am too well acquainted with the disposition of this degenerate age to expect any thing but censure and contumely in return; and know that I should have gained more reputation by advancing some trifling and useless speculation: but be that as it will, *I hope to be rewarded elsewhere.**

27. If

* *I hope to be rewarded elsewhere, &c.*—From various parts of our author's works it is clear he experienced no small share of malevolence from some of his cotemporaries—more the result of envy, than any other cause: “But,” says Dr. SWAN, “posterity has abundantly made it up to him since his death; for no one, the great Hippocrates himself not excepted, ever stood possessed of a fairer reputation, than he has since *enjoyed*, and still bears: his judgment, integrity, and candour, are universally acknowledged and applauded. The physicians of our own country have recourse to his writings *as an oracle*, and foreigners never mention him without the most honourable titles; to sum up all in one, many of them call him the English Hippocrates.” Dr. SWAN seems to be possessed also of no small share of enthusiastic zeal for the author. But though we will allow that great praise is due to the merits of SYDENHAM, yet we think his works fall something short of ORACULAR; his theory is generally loose and erroneous; his *modus medendi* in many places not perfectly just; and were it always to be adopted, and closely pursued in some cases, much mischief would be the consequence, as will be perceptible when we come to animadvert on some particular parts of his works. His chief excellence lies in the description of diseases, and here few men equal, none excel him; for he was a minute observer of nature, and attempted, not unsuccessfully, to follow her through all her mazes. In the management of diseases, his animadversions
are

27. If it be objected here, that there are those ^{The author} no less versed in practice than I am, who are of ^{only solici-} a different opinion; I answer, that it is none of ^{tous to esta-} my business to inquire into what other persons ^{blish his own} think, but to establish the truth of my own ob- ^{observations.} servations; in doing which, I only beg the reader's patience, not his favour, for the subject itself will soon shew whether I have acted with sincerity, or, on the contrary, like the most profligate wretches, endeavoured to destroy my fellow-creatures after my decease. I only beg pardon for having delivered the history and cure of diseases with less accuracy than I intended, being sensible that I have not completed my design, but rather excited men of greater abilities to undertake the finishing of a performance hereafter, that I have here executed imperfectly.

28. And now I have but one thing more to ^{Gives few} inform the reader of, which is, that I do not in- ^{particular} tend to swell the following sheets with a multi- ^{observations} tude of particular observations in confirmation of ^{to avoid} the method therein delivered; for it would be ^{swelling the} both needless and tiresome to repeat those things ^{work;} particularly which I have comprised in a sum-

are accurate, and his discernment sagacious; but he rather laboured in acute complaints to pursue the particular courses, and assist in the different stages, than advert to the methods of prevention, which certainly may in many cases be accomplished. And though no physician can deserve higher encomiums than SYDENHAM, considering the state of physic at that period of time in which he practised; yet the improvements made in the art since his day, forbid us to pay so slavish an obedience to his documents, as the idea of his being an oracle in medicine would enforce. Experience should only direct us in medical pursuits, and whenever we find notions deviating from the path of truth, however great the characters who may have adopted them, they should be done away without reserve. W.

The Author's Preface.

mary way. I esteem it sufficient to subjoin occasionally a particular case, containing the substance of the preceding method, at the conclusion of every general observation, at least with respect to late years. And I declare that I have published no general method, that has not been established and verified by frequent experience.

and only a few prescriptions,

29. Whoever expects to meet with abundance of prescriptions will be disappointed; it being left to the judgement of the physician to prescribe as the circumstances may require. I have done my part by mentioning the indications to be answered, and pointing out the time and manner of doing it: for the practice of physic chiefly consists in being able to discover the true curative indications, and not medicines to answer them; and those that have overlooked this point have taught empirics to imitate physicians.

Apologizes for the simplicity of the medicines he recommends.

40. But if it be objected, that in some cases I have not only renounced the pompous part of prescription, but likewise recommended such medicines, as, by reason of their simplicity, have little or no affinity with the *materia medica*; I answer, that I conceive that this procedure will offend none but persons of little understanding and less benevolence; for the wise know that every thing is good which is useful. And that *Hippocrates* in advising the use of bellows in the *iliac passion*, and the total disuse of all medicines in a *cancer*, with other articles of the like nature, which occur in almost every page of his writings, deserves to be esteemed as able a physician, as if he had filled them with the most pompous prescriptions.

31. I intended also to have given a history* of chronic diseases, at least of those I had most frequently treated; but as this will be a work of labour, and being desirous likewise to see first how these sheets are received, I defer the prosecution of it to some other time.

* I intended also to have given an history, &c.—With the completion of this intent, said to be drawn up with great thought and care, and given to the editor of his works by SYDENHAM himself, we are favoured in his *Processus integri*; but it seems to be a performance not wholly to be depended upon. In consulting our author it would be more adviseable to turn to those parts of his work, where he treats of particular diseases in a less concise manner, and where Notes illustrative, explanatory, and corrective are annexed, in order to avoid error, and supply deficiencies. W.

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SECT.

SYDENHAM

ON

DISEASES.

SECTION I. CHAP. I.

Sect. 1.

Of acute Diseases in general.

1. *A DISEASE*,* in my opinion, how prejudicial Diseases defined.
soever its causes may be to the body, is *no more than a vigorous effort of nature* to throw off the morbid matter, and thus recover the patient. For as God has been pleased so to create mankind

* *A disease is no more than a vigorous effort of nature, &c.*

Agreeable to this definition, the effects of disease are placed for disease itself, consequences for a cause; which gives us a very inadequate idea of the matter we expect, by this term, to be understood—for the disease does exist before the effects are produced. Indeed, it is rather surprizing, that even at this day, amongst the number of definitions given, none of them should be so fully comprehensive as to take in all that is meant by the term:—Some diseases receive their appellations from their causes; as the stone, worms, hydrocephalus, &c. Some are merely, and indeed most of them only an enumeration of symptoms or effects; as the jaundice, rheumatism, gout, &c.

Dr. SWAN, the last Commentator on the works of SYDENHAM, says, “a disease may be defined, a considerable alteration in the motion, mixture, or quantity of the fluids; a too great tension, or relaxation, and consequently an acceleration or languid motion of the solids; affecting the whole body, or only some parts thereof; joined with a remarkable disorder of the secretions, excretions, vital, or animal functions; and tending either to recovery, death, or the disordering some parts of the body when the disease terminates in another.”

Sect. 1. mankind, that they should be fitted to receive various impressions from without, they could not, upon this account, but be liable to different disorders; which arise (1.) either from such particles of the air, as having a disagreement with the juices, insinuate themselves into the body, and, mixing with the blood, taint the whole

This definition is confused, and imperfect—a jumbling together of few causes and many consequences unnecessarily. It wants perspicuity and amplitude.—The Doctor seems conscious of the difficulty of the task;—for he says, “The description of a disease, as it appears in all its various symptoms in the human body, is ever the best definition that can be given of it; this alone is truly scientific, and rests upon the most solid foundation.” This may be true with regard to particular diseases; but here a general definition is wanted, in which the whole of the varieties may be enveloped. *Sydenham* certainly formed his, from his idea of fever; where he supposed morbid miasma had been received into the habit, occasioning constitutional disturbance, and was to be eliminated or subdued; or where some change was necessary to be brought about in the blood and fluids, and they, as it were, purified or cleared from some offensive materials. But as diseases are denominated differently by authors, from various principles, sometimes depending upon causes, sometimes from appearances; such a general definition is required, in which the whole may be included. We therefore think, disease may be defined—

A præter- or super-natural affection of some part or parts, or the whole of the machine, by which the system is injured and disturbed; or the action of a part impeded, perverted, or destroyed; attended with peculiar symptoms, adapted to the nature of the affection, and parts affected: or appearances deviating from health, from some general or partial affection, by which the system in general, or in part, is oppressed or disfigured.

This definition appears to comprehend fully every disease, however arranged, and whatever called by any writer. And as some diseases receive their appellation from the immediate acting cause, or from some collection in a part or parts of the body; as dropsy, stone, hernia, &c. whilst others are only an assemblage of symptoms—such a definition as is here given, becomes absolutely necessary. *W.*

frame;

frame ; or (2.) from different kinds of fermentations and putrefactions of humours detained too long in the body, for want of its being able to digest, and discharge them, on account of their too large bulk, or unfuitable nature. Chap. 1.

Their causes.

2. These circumstances being so closely interwoven with our constitutions, that no man can be entirely free from them, Nature provides such a method and train of symptoms, as may expel the peccant matter that would otherwise destroy the human fabric. And though this end would be more frequently obtained by these disagreeable means, were not her method obstructed through unskilfulness ; yet, when left to herself, either by endeavouring too much, or not enough, the patient pays the debt of mortality : for *it is an immutable law, that no generated being can always continue.* Their symptoms.

*Constat æternâ positumque lege est,
Constat ut genitum nihil.*

BOETIUS.

3. A little to exemplify this doctrine : What is the *plague* but a complication of symptoms to throw out the morbid particles (taken in with the air we breathe) through the proper emunctories, by way of external abscess, or other eruptions ? What is the *gout*, but the contrivance of nature to purify the blood of aged persons, and, as *Hippocrates* phrases it, to purge the recesses of the body ? *And the same may be said of many other diseases,** when they are perfectly formed. Illustration.

4. But

* *And the same may be said of many other diseases, &c.* Nothing is more evident than that the body is a living machine, so formed that many of its disorders correct themselves, and restore the body to its natural state ; whilst others perpetuate and increase themselves, and bring on its destruction

Sect. 1.
 Acute
 diseases,
 whence.

4. But nature performs this office, quicker or slower, according to the different methods she takes to expel the morbid cause. For when a fever is required to loosen the morbid particles from the blood, to promote their separation, and at length discharge them by sweat, a looseness, eruptions, or other similar evacuation; as this effect is produced in the mass of blood, with a violent motion of the parts, it follows, that the change to recovery or death, must be sudden, (according as Nature can conquer the morbid matter by a crisis, or is forced to submit) and that these efforts must be joined with violent and dangerous symptoms. And of this kind are all *acute diseases*, which come to their state with rapidity, violence, and danger. Now, in this way of speaking, all those diseases may be esteemed *acute*, which, with respect to their fits taken together, go on slowly, but with respect to a single fit are soon terminated *critically*, of which kind are all intermittent fevers.

Chronic
 diseases,
 whence.

5. But where the matter of the disease is such that it cannot raise the assistance of a fever, for its thorough discharge, or is fixed upon a particular part too weak to expel it, either on account

tion. Hence, it clearly follows, that it is the business of physicians to discover from observation, the several ways leading to these contrary ends, in the several disorders of the body; to promote the first and oppose the last. Thus, for instance, acrimonious matter in the stomach and bowels occasions a vomiting and looseness; which are sometimes just sufficient to relieve the body, by discharging what is offensive; sometimes fall short of this; and at others are so violent as to end in exhaustion and death. Accordingly the physician ought, in some cases, to give emetics or purgatives, and in others, opiates, as experience, with the reasoning resulting from it, shall direct.

of the peculiar structure of that part, (as in the palsy, where the morbid matter is fixed in the nerves, and an empyema, where it is discharged into the cavity of the breast) or through a want of natural heat and spirits, (as when phlegm falls upon the lungs weakened by age, or an habitual cough) or lastly, from a continual afflux of a new matter, whereby the blood becomes vitiated, and, by its vigorous endeavours to throw it off, overpowers and oppresses the part affected; in all these cases, the matter is slowly brought to concoction, or not at all; and therefore diseases proceeding from such indigestible matter, are what we properly term *chronic*. And from these two contrary principles, *acute and chronic diseases* * respectively arise.

Chap. 1.

6. As to acute diseases, of which I now design to treat, some of them proceed from a latent and inexplicable alteration of the air, infecting the bodies of men; and not from any peculiar state or disposition of the blood and juices, any farther than an occult influence of the air may communicate this to the body; these continue only during this one secret state or constitution of the air, and, raging at no other time, are called *epidemic distempers*.

The causes of acute epidemic diseases.

7. There are other acute diseases, arising from some peculiar indisposition of particular persons; but as these are not produced by a general cause,

Intercurrent or sporadic acute diseases.

* *Acute and Chronic diseases, &c.* Without adverting to particular causes, concoction, &c. these terms are derived from the nature of effects; we therefore call all those diseases which run rapidly on to their termination, and are attended with violence, and immediate danger, *ACUTE*; those which are slow in their progress, unattended with great degrees of severity, and continue a long series of time, *CHRONIC*. *W.*

Sect. 1. few are seized with them at once. These also appear in all years, and at any time of the year indifferently, some exceptions admitted, which I shall hereafter mention, in treating of this kind particularly. These I call *intercurrent* or *sporadic* acute diseases, because they happen at all times when epidemics rage. I will begin with epidemics, and chiefly propose to give a general history thereof.

C H A P. II.

Of epidemic Diseases.

Epidemic diseases differ surprizingly;

1. IF one were to examine all the branches of physic, nothing, perhaps, would appear so surprizing as the different, and perfectly dissimilar face of epidemic diseases; which do not so much relate to, and depend upon the various seasons of the same year, as upon the different constitutions of different years.

require a different treatment.

2. And this manifest diversity of these diseases still farther appears, not only from their proper and peculiar symptoms, but also from the different method of cure they respectively require. Hence it is clear, that these distempers, though to less accurate observers they may seem to agree in their external face, and certain symptoms in common, are, in reality, of very different and dissimilar natures. Whether a careful examination, such as, perhaps, could not be well made in the life of one man, might shew, *that certain tribes of epidemic disorders,** constantly follow others, in

* *That certain tribes of epidemic disorders, &c.* However useful the ascertainment of this point might be, we seem to have

in one determined series, or circle, as it were; Chap. 2.
or whether they all return indiscriminately, and without any order, according to the secret disposition of the air, and the inexplicable succession of seasons, I am not certain.

3. This, however, I am convinced of from numerous careful observations, that the above-mentioned kinds of diseases, especially continued fevers, differ so extremely, that the same method which cures in the middle of the year, may possibly prove destructive at the conclusion of it; and when I had once happily fallen upon a genuine method of treating any species of fevers, suitably to its nature, I always proved successful (proper regard being had to the constitution, age, and other particular circumstances of the patient) till that species became extinct, and a new one arose; when I was again doubtful how to proceed, and, notwithstanding the utmost caution, could scarce ever preserve one or two of my first patients from danger, till I had thoroughly investigated the nature of the distemper, and then I proceeded in a direct and safer way to the cure.

4. And though I have carefully observed the different constitutions of different years, as to the manifest qualities of the air, that I might from thence discover the causes of the so great dissimilitude of epidemic diseases, yet I must own, I have hitherto made no progress; having found that years perfectly agreeing as to the manifest temperature of the air, have nevertheless pro-

duce no steps taken towards the acquisition of this species of information; and reason pleads strongly in favour of the latter opinion, particularly when we consider that constitutional predisposition is necessary to produce febrile morbid effects. *W.*

Sect. 1. duced very different tribes of diseases ; and *vice versa*.

Stationary
fevers de-
fined.

5. The matter seems to stand thus : there are various general constitutions of years, that owe their origin neither to heat, cold, dryness, nor moisture ; *but rather depend upon a certain secret and inexplicable alteration in the bowels of the earth,** whence the air becomes impregnated with such kinds of *effluvia*, as subject the human body to particular distempers, so long as that kind of constitution prevails, which, after a certain course of years, declines, and gives way to another. Each of these general constitutions is attended with its own proper and peculiar kind of fever, which never appears in any other ; and therefore I call this kind of fever *stationary*.

6. There are also certain particular constitutions of the same year, in which, though such kinds of fevers as follow the general constitution of the year, with regard to the manifest qualities of the atmosphere, may prove more or less epidemic, and rise either earlier or later ; yet the fevers that appear in all years (which we therefore call *intercurrents*) do proceed from some one or other manifest quality of the air ; for instance,

* *But rather depend upon a certain secret and inexplicable, &c.* It is singular that a man who reprobates the search after remote causes, and despises all speculative and hypothetical notions, should fall upon this mode of reasoning ; one who recommends the rejection of all pursuits after things which are incomprehensible to man's understanding, should pretend to account for diseases arising from the air being impregnated with such kinds of effluvia, deducing their origin from secret and inexplicable alterations in the bowels of the earth. It is truly paradoxical, and can only serve as a proof, that even the greatest characters can now and then deviate from themselves, and love to wander in the paths of visionary conjecture. W,

pleurifies,

pleurifies, quinsies, and the like, which generally happen when an intense and long continued cold is immediately succeeded by a sudden heat.

Chap. 2.

It may therefore be, that the sensible qualities of the air have some share in producing those inter-current fevers, which appear in every constitution of the atmosphere, but they do not cause the epidemics peculiar to the general constitution.

Stationary fevers not produced by the manifest qualities of the air.

And yet, at the same time, it must be acknowledged that the above-mentioned qualities of the air may more or less dispose the body to the particular epidemic disease; and the same may be affirmed of any error in the non-naturals.

7. Now it must be observed, that some epidemic diseases, in some years, are uniformly and constantly the same, appearing in almost every patient with the same train of symptoms, and going off in the same manner. From this kind, therefore, as the most perfect, the genuine history of epidemic diseases is to be taken.

Some epidemics regular.

8. On the contrary, in other years there are other distempers, which, though called epidemic, prove very irregular and dissimilar, as having no one fixed form, or constant appearance, but are extremely irregular, both as to the variety and dissimilarity of the symptoms, and the manner in which they proceed and go off. This great variety in epidemics happens from hence, that every constitution produces diseases considerably differing from those of the same kind that prevailed in other constitutions at another time; which not only holds true of fevers, but of most other epidemic diseases.

Others irregular.

9. Nor is this all; for there is another subtilty of nature still behind, viz. that the same disease, in the very same constitution of the year, frequently

Sect. 1. quently appears in a various and dissimilar manner, as to the time of its beginning, state, and declension; which is an observation of such consequence, as to regulate the indications of cure.

Epidemics
either vernal
or autumnal

10. Again, it must be observed, that all epidemics are of two sorts, *viz. vernal* and *autumnal*, and though they may possibly arise at a distant time of the year, yet they must be referred either to spring or autumn, accordingly as they approach thereto respectively: for sometimes the temperature of the air conspires so much with an epidemic disease, as to produce it before its time; and, on the other hand, it sometimes opposes it so much, as to make it appear later, even in persons disposed to receive it. When, therefore, I shall mention spring or autumn, I do not precisely mean the *vernal* or *autumnal* equinox, but take in a wider compass.

The course
of some ver-
nal one.

11. Some vernal epidemics appear early, as in *January*, and thence gradually increasing, come to their state about the vernal equinox, after which they gradually decrease, and at length disappear about the summer solstice, except, perhaps, in a very few instances. Of this kind I reckon the measles, and vernal tertians, which, though they rise somewhat later, as in *February*, do likewise disappear near the summer solstice; whilst others, rising in the spring, and daily increasing, come not to their state till about the autumnal equinox, after which they gradually decrease, and vanish at the approach of winter. Of this kind are the plague and the small-pox, in those years when either of them is the principal disease of the year.

The differ-
ent duration
of autumnal
epidemics.

12. The *cholera morbus*, which is of the number of autumnal epidemics, rises in *August*, and finishes its course in a month; though there are other

other diseases which arise at the same time, and run on to the winter; as autumnal dysenteries, tertians, and quartans; all which, however, notwithstanding the longer or shorter space they sometimes affect a few particulars, generally cease in two months. Chap. 2.

13. *As to fevers in particular,** it must be observed, that the greatest part of them which are of the continued kind, have hitherto no names assigned them, as they depend upon the influence of a general constitution or state of the air; but the names whereby they are distinguished, are derived from some remarkable alteration made in the blood, or some other apparent symptom; whence they are called *putrid, malignant, pete-*

Names of epidemic fevers, whence to be taken.

* *As to fevers in particular, &c.* The names given to fevers at present, are derived from different principles; but first, generally according to their type or form, which is descriptive of the mode of their progress, and divided into various species, agreeable to what is thought their peculiar nature; as continued, remittent, intermittent, of which some are inflammatory, nervous, putrid, exanthematous, hectic, &c.: but how they are to be denominated from the constitutions of the air, which are supposed to produce them, and which, according to our author's own account, are inexplicable, is not easy to be conceived: perhaps the present division might be advantageously altered, were fevers to be named according to the affection of one part of the system predominated over the other; *exempli gratia*—where irritability in the vessels took place most perceptibly, those fevers should be stiled *vascular*; where the nerves were more visibly affected, *nervous*; where the affections equally combined, *mixed*; or as the affection tended more to one than to another, *nervous-vascular*, or *vascular-nervous*;—Under which general heads, particular specifications might be properly classed. Hence, we should be led to the parts immediately affected, understand the nature of the affection, and be directed with more certainty in our practice; and from such clearness and precision, the younger practitioners avoid those fatal errors into which they are too apt to fall. *W.*

chial,

Seçt. 1. *chial, &c.* But as almost every constitution, besides the fevers it produces, eminently favours some remarkable epidemic disease, as the plague, small-pox, dysentery, &c. I should think that these fevers ought to derive their names from the constitution, as this tends more peculiarly to produce some one of these remarkable distempers, at the time they appear, rather than from any alteration of the blood, or particular symptom; both which may equally accompany fevers of different kinds.

Intermittents, how distinguished.

14. Intermittents, indeed, derive their names from the interval of two fits, and by this mark are sufficiently distinguished, provided regard be had to the two divisions of the year wherein they happen, *viz.* spring and autumn. And yet sometimes fevers are of the true nature of intermittents, without any visible sign to discover them by. So when autumnal intermittents enter and appear early, as in *July*, they do not presently assume their genuine form, as vernal intermittents generally do, but so far resemble continued fevers in all respects, as not to be distinguished, without a very strict examination; but at length, when the force of the prevailing constitution is a little weakened, they appear more genuine, and at the close of autumn, quitting their disguise, plainly manifest themselves to be intermittents either of the tertian or quartan kind, as they really were from the first; *but if this be not carefully attended to,** physicians will be deceived to the

Autumnal ones sometimes appear as continued.

* *But if this be not carefully attended to, &c.* In this observation there is more nicety than use; for if fevers of the intermittent class so far put on the appearance of those of the continued type, as scarce to be distinguishable, why may they not as such be treated? For by these means they may

the disadvantage of their patients, by taking such Chap. 2.
kinds of intermittents for true continued fevers. }
}

15. *Again it must be carefully remarked,** that as many of these diseases appear in the same year, some one or other of them rules over the rest, which rage less at the same time; so that this one increasing, the others decrease, and this diminishing, the others soon re-appear. And thus they prevail by turns, according as each is favoured by the disposition of the year, and the sensible qualities of the air; and that distemper which rages most violently about the autumnal equinox, gives its name to the constitution of the whole year: for whatever distemper then prevails over the rest, will easily be found to preside over them during that year; and to the disposition thereof all the then reigning epidemics accommodate themselves, so far as their nature permits.

Some one epidemic usually prevails over the rest,

to the nature of which the rest approach.

16. Thus, for example; when the small-pox prevails much, the fever of that year, which is less general, plainly partakes of the same inflammatory nature therewith; so that both distem-

Instanced in the small-pox and dysenteries.

may be cured, particularly if they be of the tertian class; or sooner alter their form into those which are more easily conquered; for in proportion as continued fevers approach nearer to intermittents, so much is the danger lessened, and indicates, that nature, though not strong enough totally to subdue the fever immediately, is not likely to fall in the contest, but may be more readily and certainly assisted by judicious management. *W.*

* *Again it must be carefully remarked, &c.* To what is here laid down, we should always attend; for it is founded on truth, and perpetually manifested to observation, and may serve in a great degree to regulate our practice; for certainly all febrile affections which have no known or certain cause, partake of the nature of the reigning epidemic, as SYDENHAM has elegantly explained in the succeeding paragraph. *W.*

sect. 1. } pers begin after the same manner, and are attended with a great similarity of the most peculiar symptoms, as manifestly appears from the great tendency to spontaneous sweats, and the discharge of *saliva* in both; and they only differ in the eruption of the pustules, and whatever depends thereon. Again: when dysenteries are the principal raging disease of the year, the fever of the same year bears great resemblance to the nature; excepting only that, in a dysentery, the morbid matter is discharged by stool, with a few symptoms thereon depending; for they both attack in the same manner; and in both cases *Apthæ*, and the like symptoms, are equally apt to appear, and indeed the dysentery we speak of, is the very fever itself, with this particularity, that it is turned inwards upon the intestines, and discharges itself that way.

Prevailing epidemics checked by the coming in of winter.

17. But it must be remarked, that this principal epidemic which rages about the autumnal equinox, and lays all waste before it, is checked upon the coming in of winter; whilst, on the contrary the lower class of epidemics, subservient, as it were, to that principal one, now chiefly rage, till the said reigning distemper of the year again prevails, breaks their force, and abolishes their very name.

All epidemics of one constitution produced by one common general cause.

18. Lastly, it must be observed, that whenever any constitution produces various species of epidemics, all these species differ in kind from those which have the same name, but are produced in another constitution. But how many peculiar species soever arise in one and the same constitution, they all agree in being produced by one common general cause, *viz.* some peculiar state of the air; and consequently how much soever

ever they may differ from one another in appearance, and specific nature, yet the constitution common to them all works upon the subject-matter of each, and moulds it to such a state and condition, that the principal symptoms (provided they have no regard to the particular manner of evacuation) are alike in all; all of them agreeing in this circumstance, that they respectively grow mild or violent at the same time. It is farther to be noted, that in whatever years these several species prevail at one and the same time, the symptoms wherewith they come on are alike in all.

19. Hence we may see how very various and subtle a method nature uses in producing diseases, which no one, I conceive, has hitherto traced in proportion to the dignity of the subject; and it appears from this short account, that as the specific differences of epidemic distempers, especially fevers, *depend upon the secret constitution of the air*,* that those persons labour unprofitably, who deduce the causes of different fevers from the morbid matter gradually collected in

Chap. 2.
The causes of fevers, whence to be derived.

* *Depend upon the secret constitution of the air, &c.* It should seem possible, by a set of well adapted experiments accurately made, to discover what are usually called the occult qualities of the air, so frequently mentioned by our author, and rendered them manifest to the senses. And, if by this means, we could come at a tolerable knowledge of the effluvia, salts, and other heterogeneous matters, wherewith the air at different times, and in different countries, is replete, it might give us almost a complete knowledge of the nature of all epidemic diseases that may arise for the future, provided due attention be given at the same time to the age, sex, constitution, manner of living, &c. of the patient; all which circumstances being carefully considered, and compared together, might probably direct to rational, fixed, and effectual methods of cure.

The

Sect. 1. in the body; for it is evident that if any man in perfect health,* should remove to any part of our own country where an epidemic disease rages, he might in a few days be seized with it, though it is scarce credible that any manifest alteration should be made by the air in the juices of the same person, in so short a time.

The prosecution of this subject, by experiment, and not by way of conjecture, or hypothesis, is surely worthy the notice of all such as have leisure and abilities for the undertaking; since very considerable advantages will accrue to mankind when once a history of this sort shall be in some measure completed. The excellent Mr. Boyle has made great advances herein, and laid down the methods that should be followed, in order to succeed in the attempt.— See Dr. Shaw's *Abridgement of his Works*, in 3 vols. 4to; Arbutnot on Air; Dr. Hales's *Statical Experiments*, and Huxham *de Aere et Morb. epidemicis*.

* For it is evident, that if any man in perfect health, &c. This appears to be a strong proof, that epidemic diseases produce their effects on the constitution, not from the alteration of the blood or humours, so much as from affections of the vascular or nervous system; for we know that fear will have similar consequences. The semina morbi will lie dormant in the constitution, and circulate through the mass of fluids, without being capable of causing any perceptible change in the habit; for people will live together in the same state of air, in the same habitation, feed on the same viands, &c. with others epidemically affected, and still remain perfectly free from all appearance of disease. This must certainly be owing to a want of constitutional predisposition, so necessary before the machine can become sensible, or experience effects to be produced by the action of the morbid miasmata: but let them change the air, or be operated upon by fear, they will very often fall suddenly into the reigning malady. It cannot be supposed that the blood and humours can suffer such instantaneous changes; the conjecture is improbable: but we have many proofs of the sensible parts of the system being immediately acted upon, and there is scarce a doubt but that this action is the cause of that predisposition requisite for the production of the complaint. W.

20. *Nor is it less difficult to lay down general* Chap. 2.
rules * for the cure of these fevers, or to fix cer-
 tain limits for practice. Under so much dark-
 ness and ignorance, therefore, my chief care,
 as soon as any new fever arises, is to wait a lit-
 tle, and proceed very slowly, especially in the
 use of powerful remedies; in the mean time
 carefully observing its nature and procedure,
 and by what means the patient was either re-
 lieved or injured; so as soon to embrace the one,
 and reject the other.

Difficult to
lay down a
general meth-
od of cure.

21. In short, to reduce all the species of epi-
 demics into classes, according to the variety of
 their appearances, to explain their peculiar signs,
 and point out a proper method of cure for each,
 is a very difficult task, and requires much time;
 and as they arise in no stated order of years; (at
 least this is not yet discovered) to procure a
 just collection of observations about them, would
 perhaps require more than the life of any one
 physician; yet this task, how difficult soever,
 must be performed, before it can be justly said
 we have done any thing considerable towards
 discovering the intricacy of these disorders.

Epidemics
not easily
classified and
explained.

22. But how shall we give an account of the
 distinct species of epidemics, which not only,
 so far as appears, arise fortuitously, but also
 continue of the same kind for a single year, or
 some certain series of years; but in another year
 differ from each other specifically? The best

Best distin-
guished by
describing
them.

* *Nor is less difficult to lay down general rules, &c.* Might
 not a due regard to the preceding and the then reigning
 manifest temperature of the air, the manner of living, con-
 stitution, age, and sex of the patient, together with a strict
 attention to the first symptoms of any epidemic fever, ena-
 ble the physician to proceed with greater certainty in the me-
 thod of cure, than our author seems to judge possible?

Sect. 1. method I can pitch upon is that which describes them thro' a competent number of years, in the same order in which they happened; and to do this at present, according to my ability, I will here deliver the history and cures of those epidemics which raged from the year 1661, to 1676, viz. the space of 15 years; and this according to the most accurate observations I have been able to make; for it seems to me impossible to do any thing to this purpose by endeavouring to assign their causes, as derived from the manifest qualities of the air; or from any particular indisposition in the blood and juices, unless so far as this may depend upon a secret influence of the air. And it would be still more impossible to set down the species of various epidemics, as arising from some specific alteration of the air, however easy this might seem to those who can affix the names of fevers to ill-formed notions, from the speculation of such alterations as may happen in the blood or juices by any particular degeneration of principles. By this means, indeed, whilst we depart from nature, which is always the best guide, and indulge ourselves the liberty of conjecture, we may make as many species of diseases as we please; though at the same time we take such a liberty as no one would easily grant to a botanist, who, in writing the history of plants, is obliged to abide by the testimony of the senses, and not indulge his talent at conjecture, however excellent he may be therein.

23. *I presume not here to deliver any thing perfect,** not even in enumerating the whole class of
 of

* *I presume not here to deliver any thing perfect, &c.*
 However sanguine may have been our author's hopes of having

of epidemics; much less will I answer for it, Chap. 2.
that the diseases I mention, as following one another in the order I set them down, shall keep the same order hereafter. The thing I endeavour, is to shew, by the assistance of a few years observations, how this matter stood lately with respect to my own country, and the city wherein I live, in order to assist in beginning a work that, in my judgement, will greatly tend to the advantage of mankind, when, at length, it shall be finished by posterity, and the

having it proved, that epidemics preserve a regular succession, we find no proofs have been yet brought in the least to confirm his conjecture: it is rather to be feared there is no real foundation to build upon; especially when we reflect on the amazing variability of the air in this climate, as well as the sudden changes it undergoes; insomuch, that in one day we shall often experience its sensible qualities repeatedly altered with regard to its gravity, or levity, cold, heat, moisture, dryness, and elasticity. Were the seasons to preserve any uniformity in the states of the air, something of this sort might be suspected, as different states are, it is known, productive more of one disease than another; and these are rendered more or less violent and dangerous according as the air is more or less calculated to increase or lessen their activity.

In an atmosphere so fluctuating as our's it is a vague idea, and may be productive of much mischief, to think of treating the same distemper differently, as the different constitutions of the air are more prevalent.

The only rational mode is, to consider the symptoms conjunctly with the constitution, age, sex, mode of living, &c. of the patient, and to regulate our treatment, be the epidemic of what nature it will, consistent with the inferences from thence to be drawn: the symptoms should be our index to direct us to the immediate cause of the disease against which we are to militate; and the constitution of the air may be considered as a remote, or conjunct cause, assisting to lead us to that more immediate, but should not be by any means permitted solely to influence our practice. *W.*

Sect. 1. whole series of epidemics be exhibited to view,
 as they shall succeed each other for the future.

C H A P. III.

*The epidemic Constitution of the Years 1661, 1662,
 1663, 1664, at London.*

The tertian
 of this con-
 stitution de-
 scribed ;

1. **T**HE autumnal intermittent fevers which had reigned for several years backwards, appeared with new force in the year 1661, especially a bad kind of tertian, about the beginning of *July*, which continually increased so as to prove extremely violent in *August*, seizing almost whole families in many places with great devastation; after which it gradually decreased upon the coming on of the winter, so as to appear seldom in the month of *October*. The symptoms that attended these tertians differed from those of the intermittent tertians of other years, chiefly in the following particulars: (1.) the fit was more severe; (2.) the tongue was more black and dry; (3.) the intermission between the fits not so manifest; (4.) the loss of strength and appetite greater; (5.) a greater tendency to a double fit; (6.) all the concomitants, in short, more violent; (7.) and the disease itself more mortal than intermitting fevers usually are; (8.) when it happened in persons aged, or of a bad habit of body, where, besides, either bleeding or any other evacuations had diminished the strength, it would continue for two or three months.

followed by
 a continued
 fever,

2. A few quartans accompanied these tertians, but both of them went off upon the first coming

ing on of winter, (for they seized upon none Chap. 3.
 that were unaffected by them before) and were
 followed by a continued fever, differing from
 the nature of autumnal intermittents only in
 this; that *they* happened at stated times, but *this*
 without intermission; for they both seized almost
 in the same manner, and those that were violent-
 ly attacked with either, had a vomiting, dryness
 of the external parts, thirst, and blackness of
 the tongue: sweats also, towards the end of the
 distemper, readily discharged the morbidic mat-
 ter in both cases.

3. And it may even from hence appear that
 this fever belonged to the class of autumnal in-
 termittents, because it very rarely shewed itself
 in the spring. This continued fever, therefore,
 appeared to me a kind of compendium of the
 intermittent; as, on the other hand, each single
 fit of the intermittent was a kind of compen-
 dium of the continued fever. The difference
 between them consisted chiefly in this, that the
 continued fever finished its period of efferve-
 scence all at once, in the same constant course;
 but the intermittent, by fits, at different times.

4. How long this continued fever had pre-
 vailed, I cannot say, having been hitherto suf-
 ficiently employed in observing the general
 symptoms of fevers, and not yet finding that fe-
 vers might be distinguished, with regard to the
 various constitutions of different years, or the
 different season of the same year. This, how-
 ever, I know, that there was only one species of
 continued fevers to the year 1665, and that the
 autumnal intermittents, which were frequent to
 that year, appeared afterwards very rarely.

Only one
 species of
 a continued
 fever from
 1661 to
 1655.

C 3

5. The

Sect. 1.

The order
of the epi-
demics of
this consti-
tution.

5. The above-mentioned tertian fever, which spread very wide in 1661, as was said above, contracted itself in the succeeding year; for, in the following autumns, quartans prevailed over the other epidemics, during this constitution of the air. As the quartans always grew milder after the autumn, the continued fever, which appeared more rarely during all this time, now raged more violently, till the spring, when vernal intermittents succeeded, which also going off at the beginning of *May*, the small pox appeared a little, but disappeared again upon the coming in of the autumnal epidemics; *viz.* the continued fever and quartans, which then reigned. In this order did the epidemic diseases appear and succeed each other, during this whole constitution of the air; of which I am now to treat in particular, especially of the continued fever, and intermittents, whether vernal or autumnal, these being the chief distempers of this constitution.

This conti-
nued fever,
of a capital
kind;

6. I begin with this continued fever, which appears to me of a more capital kind than any of the rest; because nature here brought the febrile matter to a due concoction, and expelled it when concocted, in a limited time, more uniformly and regularly, than in any other fever. Moreover, as those constitutions of the year which favour autumnal intermittents return more frequently, taking one year with another, than such as produce other epidemics, it follows that the continued fever attending intermittents occurs oftener than any other continued fever.

Occurs of-
tener than
the rest.

7. Besides the symptoms which accompanied other fevers, the present fever had these in particular, *viz.* (1.) a great faintness, (2.) vomit-
ting,

ring; (3.) a dry and black tongue; (4.) great Chap. 3.
and sudden loss of strength; (5.) a dryness of
the external parts; (6.) the urine constantly ^{Its symp-}
either turbid or thin, both of them here equally ^{toms.}
signs of crudity; (7.) a looseness in the decline,
unless the physician happened to stop it at first,
whereby the disease was prolonged, and rendered
more obstinate; (8.) but in its own natural
course it scarce lasted above fourteen, or one
and twenty days, when it went off, with a sweat,
or rather a gentle moisture; (9.) nor did any
proper signs of concoction appear before in the
urine; but at this time there generally did.

8. Other symptoms also arose when this distemper was unskilfully treated; however, as not only these, but the nature of the distemper itself will more clearly appear from the particular method which I formerly adapted to this fever, I shall here set it down, as it was then published: at least as far as it regards the present purpose; *though at that time I was not aware of there being any other species of fever in nature.**

* *Though at that time I was not aware, &c.* SYDENHAM has been accused of engaging in the practice of physic without any preparatory study, or previous knowledge of the medicinal sciences; and indeed from Dr. Swan's translation of the latter part of this sentence, one would almost be led to believe the assertion just; or that he totally disregarded the opinion of the ancients; but the fault seems to rest with the translator—SYDENHAM'S words are: "*quo quidem tempore NONDUM MIHI INNOTUERAT, aliam aliquam febris speciem in rerum naturæ inveniri*"; which do not imply that he was not aware of there being any other species of fever in nature; but that no other species of fever had yet come under his observation—at which time he had not yet known; experience had not yet taught him, that any other species of fever was to be found in nature; not that he did not suspect there were other fevers. *W.*

C H A P. IV.

*The continued Fever of the Years 1661, 1662,
1663, 1664.*

Final cause
of the com-
motion of
the blood in
this fever.

MY first observation is, *that the irregular commotion raised by nature in the blood,** either as a cause or concomitant of this fever, is excited in order to separate from it a certain heterogeneous matter contained therein, and prejudicial thereto: or else to change the blood itself into a new state.

2. And

* *That the irregular commotion raised in the blood, &c.*
This idea of the proximate cause of fevers, founded on the doctrine of humoral pathology, seems to influence our author in all his reasoning on fevers, and their modes of cure. But this doctrine has been very justly exploded; for which great praise is due to HOFFMAN; who has favoured the world with his opinion relative to fevers being formed by spasms, and atony: which idea has been farther improved by Dr. Cullen, who gives us his doctrine of fevers in the following explicit terms, and which is now almost universally adopted.

“ The remote causes of fever,” says the Doctor, “ are
“ certain sedative powers applied to the nervous system,
“ which diminishing the energy of the brain, thereby
“ produce a debility of the whole of the functions, and par-
“ ticularly on the action of the extreme vessels; such, how-
“ ever, at the same time is the nature of the animal œco-
“ nomy, that this debility proves an indirect stimulus to
“ the sanguiferous system; whence by the intervention of
“ the cold stage, and spasm connected with it, the action
“ of the heart, and larger arteries, is increased, and conti-
“ nues so till it has had the effect of restoring the energy
“ of the brain, of extending the energy to the extreme
“ vessels, of restoring therefore their action, and thereby
“ especially overcoming the spasm affecting them; upon the
“ removing of which the excretion of sweat and other
“ marks

2. And here I rather chuse to make use of the ^{Chap. 4.} general word *commotion* than *fermentation* or *ebullition*; in order to prevent all fruitless dispute about words, that might arise from the use of those, which, though they may seem harsh and metamorphical to some, are capable of a commodious interpretation. For, though the commotion of the blood in fevers does at different times resemble the fermentations and ebullitions of vegetable liquors; yet there are those who think this commotion very different from both in more respects than one. For example, say they, fermenting liquors acquire a vinous nature, so as to afford an inflammable spirit by distillation, and to be easily turned into vinegar, which yields an acid spirit by the same treatment; yet neither of these changes have been

The term *commotion* preferred to *fermentation* or *ebullition*.

“ marks of the relaxation of the excretories take place:” *Præctice of Physic, Vol. I. page 102.* “ Hence the idea of fevers may be, that a spasm of the extreme vessels, however induced, proves an irritation to the heart and arteries, and that this continues till the spasm is relaxed or overcome; but whether it be directly produced by the remote causes of fever, or be only a part of the *vis medicatrix naturæ* remains to be determined.”—He is of the latter opinion, and assigns the following reasons:

“ Because, in *the first place*, while it remains still certain that debility lays the foundation of fever, it is not obvious in what manner the debility produces the spasm; and what seems to be its effect, the increased action of the heart and arteries: and *secondly*, because in almost all the cases in which an effort is made by the *vis medicatrix naturæ*, a cold fit, and a spasm of the extreme vessels are almost always the beginnings of such an effort.”—See Sect. 41, 42. of the same chapter.

Hence then when SYDENHAM speaks of commotion, ebullition, or fermentation in the blood, and what he gives to calm or quiet these motions, we should advert to the increased action of the vascular system, and attempt to apply such remedies as will properly regulate their motions. *W.*

hitherto

Sect. 1. hitherto observed of the blood. Again, fermentation and depuration are both carried on at one and the same time in vinous liquors; whereas the depuration of the blood in fevers does not accompany but follow the analagous operation; as appears even to the eye, by the solution of a fever-fit by sweat.

Ebullition
esteemed the
improperest
term.

3. As to ebullition, this analogy, they say, is still more harsh, and, in many cases, contrary to experience, where the commotion of the blood is too gentle to deserve the title of ebullition. But not to engage in these controversies, since the terms *fermentation* and *ebullition* have prevailed among the modern physicians, I likewise have not scrupled to use them occasionally, meaning only to convey my thoughts more easily thereby. Moreover, *that this febrile commotion of the blood is raised by nature*,* in order to separate an heterogeneous and noxious matter, appears from eruptive fevers, in which an excrementitious matter, of a vitiated quality, that lay concealed in the blood, is, by means of the ebullition, thrown out upon the skin.

4. Nor is it less clear to me that a febrile commotion of the blood often tends only to introduce a new state of that fluid, and that a man whose blood is pure and untainted may be seized with a fever; for fevers frequently appear in

* *That this febrile commotion of the blood is raised, &c.* In eruptive fevers the disorders of the pulse go off entirely, or abate very much upon the eruptions appearing freely: but here a very different doctrine takes place, This happens from the system being freed from the active stimulus, and from the spasm of the small vessels being taken off, so that the morbid matter is allowed to be thrown out of the habit; deposited upon the skin in part, and in part to escape by the cuticular pores, *W.*

healthy

healthy bodies, *where there was before no previous* Chap. 4.
indisposition, either from a plethora, cachexy, or
*tainted air,** that could give rise thereto. Yet
 even in these cases, upon some remarkable pre-
 ceding change of the air, diet, and others of the
 non-naturals, a fever presently arises, upon ac-
 count of the blood's affecting a new state, or dis-
 position, such as this air and diet require, and
 not because the irritation of vitiated particles,
 latent in the blood, brings on the fever. Though
 I make no question but the matter regularly dis-
 charged in the disputation of the blood, after
 the febrile commotion, may prove vitiated,
 though the blood before was healthy: which is
 not more strange, perhaps, than that some parts
 of our food should become corrupt and fetid,

* *Where there was before no previous indisposition, &c.*
 Why it should be supposed that a fever is to be raised, where
 there appears no cause to induce or require it, merely to
 produce a change in the blood, which is allowed to want no
 change, is a mode of reasoning not easily comprehensible.
 That it does happen frequently must be allowed; but the
 purpose here assigned seems merely speculative; and framed
 more from hypothesis than rational principles: totally neg-
 lectful, or totally ignorant of primary, nervous, and vascular
 affection, our author was at a loss to assign any other cause,
 but what was consistent with the pathology of his day; and
 to this must we attribute the error. If we for a moment
 think of the causes allowed to produce fever, we shall be
 convinced of the superiority of the present theory to those
 of former times. Marsh miasmata, or human effluvia, are
 considered as the most common sources, these might be sup-
 posed to occasion sanguinary commotion; but besides these,
 cold, fear, excess in venery, intemperance in drinking, and
 other circumstances which evidently weaken the system, and
 from that source produce the same effects, strikingly corro-
 borate the idea of vascular and nervous affection, independ-
 ent of any contamination of the fluids; though they may
 incur a degree of morbid acrimony by the continuance of
 the febrile causes specified. *W.*

after

Sect. 1. after having undergone a remarkable alteration
 in the body, and suffered a separation from the
 rest.

The commotion of the blood to be duly regulated.

5. *With regard to this disease*, I judge that *the genuine indications are*,* to keep the commotion of the blood within such bounds as suit the design of nature, so as to prevent its rising too high on the one side, whence dangerous symptoms might follow; or sinking too low on the other, whereby either the exclusion of the morbid matter might be hindered, or the endeavour of the blood affecting a new state be frustrated. And hence, whether the fever be owing to the irritation of any heterogeneous matter, or to the blood's attempting a new change, the indication of the distemper will, in either case, be the same, and upon this foundation I proceed to the cure in the following manner.

Bleeding where pre-judicial.

6. *When the blood is weak, as it generally is in children, or wants its due proportion of spirit, as in declining age, or even in young persons worn out by*

* *The genuine indications are, &c.* If we were to confide in SYDENHAM's theory, these indications are right; but as that is rejected, the indications will of course be different. In the first place, therefore, we are to endeavour, *to moderate the violence of re-action*; in the second, *to remove the causes, or obviate the effects of debility*; and in the third, *to obviate or correct the tendency of the fluids to putrefaction.* Cullen's Practice of Physic, Chap. VI. sect. i. part 126. All which seem to be effected by the mode of cure here laid down in a great measure; and is a proof, as Dr. Swan observes, that SYDENHAM formed his theory after he had determined his practice, and to that made it conform. The safest mode, certainly, of constituting all theoretical notions; as it is much better to err in our reasoning from facts, than deduce a practice from opinions which may be fallacious, and become the source of innumerable, and lamentable mischiefs. *W.*

a lingering

a lingering illness, I refrain from bleeding :* Other- Chap. 4.
 wise the blood, being already too weak even
 without taking any of it away, might prove ab-
 solutely unequal to the business of despumation;
 whence the whole mass becoming corrupted,
 death might easily ensue. Thus a hasty check
 can scarce be put to the fermentation of wine,
 without injuring the liquor: for nature cannot
 bear the corrupt particles she has once begun to
 throw off, which though they were pure, whilst
 equally mixed with the blood, now strongly
 tend to taint the rest of the juices. I am well
 aware, however, that where bleeding has been
 imprudently used, the patient may be some-
 times saved by means of proper cordials, and
 the blood reduced to a proper temper for per-
 forming the necessary despumation: but pre-
 vention is better than cure.

* *When the blood is weak, &c.* By this is meant, I pre-
 sume, when the blood is loose in its texture; for bleeding
 will greatly contribute to render it less firm, and dispose it
 to run too rapidly into a state of putrefactive acrimony, be-
 sides weakening the system, and greatly debilitating the pow-
 ers of nature. But what is to be understood by its wanting
 a due proportion of spirits, I cannot divine; it can never be
 perceptible to the senses. *W.*—Old persons seem to bear
 bleeding better than either of the others. However, the
 practical doctrine here delivered is very good: only it would
 have been much easier, and more satisfactory to have found-
 ed it upon experience, or at least upon obvious reasons im-
 mediately resulting from thence. Thus in children, and
 persons exhausted by a preceding disease, the quantity of
 red blood is less in proportion to the quantity of the other
 fluids, than in robust and grown persons; neither do their
 relaxed vessels compress the fluids so strongly, and turn
 them into red blood so fast. They cannot, therefore, sup-
 port the loss of red blood so well.

7. *When*

Sect. 1. 7. *When the blood happens to be of a contrary disposition,** as it usually is in young persons of a strong and sanguine habit, I esteem bleeding the first step to the cure, and not to be omitted without danger, except in the cases hereafter mentioned; for without it, not only deliriums, phrensies, and the like disorders from inflammation might arise from too great an effervescence of the blood, but also the circulation might be obstructed, or the whole mass, in a manner, stagnate from its excess in quantity.

Bleeding,
where fer-
vicable.

In what pro-
portion to
be used.

8. *As to the proportion, I usually take away †* no more than I conceive may prevent those incon-

* *When the blood happens to be of a contrary disposition, &c.* By this is meant, where an inflammatory diathesis is prevalent; by which we understand a strong tone of the vascular system, and too firm a texture of the sanguinary mass; for under these circumstances there scarce can be any fever where bleeding is not requisite, and in a vast variety of cases, almost all, the omission would be an unpardonable error, which cannot be compensated by any means during the whole course of the disease. But great care is necessary to be certain in distinguishing when such a state of the blood and vascular system do actually exist; which will be discoverable by a quick, tense, full, hard, and frequent pulse; great heat; pains in the head, and different parts, all which indicate too violent re-action of the system; otherwise bleeding may occasion too great debility, and increase the danger. — There seems here an obvious defect, a description of the distemper by a regular detail of the symptoms is wanting, which ought to have been premised, as observed by Dr. Swan. *W.*

† *As to the proportion I usually take away, &c.* This should be adapted to the strength of the patient, and urgency of the symptoms. The quantity should be only in such a proportion as the constitution can bear without suffering any inconvenience, and at the same time may serve to alleviate the oppressive symptoms; “For should the evacuation be greater than is necessary, it may occasion a slower recovery, render the person more liable to a relapse, or bring on other diseases.” Cullen’s Practice of Physic, page 191, sect. 1. §. 140. *W.*

veniciencies,

veniencies, which, as we said above, might proceed from an immoderate commotion of the blood; afterwards regulating the degree of heat, by repeating or omitting bleeding occasionally, together with the free or sparing use of warm cordials, and lastly by the use of laxatives or astringents, as I observe the commotion to prevail or languish. Chap. 4.

9. *After bleeding, where it was necessary,** I carefully inquire *whether* the patient has had any vomiting or retching at the beginning of the fever; and if he has, I order an emetic, unless the tender age, or some remarkable weakness

A vomit,
where ne-
cessary and
where not.

* *After bleeding, where it was necessary, &c.* The necessity of an emetic is here clearly pointed out; as sickness, vomiting, and retching may be immediately owing to some foulness lodged in the stomach; which may be useful in the first instance by removing those affections occasioned by offensive matter loading that organ; preparing the way for the efficacy of future medicines, considering also the effect of sympathetic action upon the other parts of the machine becoming more certain, and determining the fluids to the surface of the body.—

“Vomiting,” says Dr. Cullen, “is useful in fevers in many respects; as it evacuates the contents of the stomach; as it emulges the biliary and pancreatic ducts; as it evacuates the contents of the duodenum, and perhaps also of a larger portion of the intestines; as it agitates the whole of the abdominal viscera; expedes the circulation in them, and promotes their several secretions; and lastly, as agitating the viscera also of the thorax it has the like effects there. And by the particular operation of emetics upon the muscular fibres of the stomach, they excite the action of the extreme arteries on the surface of the body, so as thereby effectually to determine the blood into these vessels, remove the atony, and take off the spasm affecting them.” *Prac. Phy.* p. 218.—Hence the great utility which may be derived from the action of medicines of this class in the beginning of acute fevers is indisputably obvious, however their efficacy may have been disputed. *W.*

of

Sect. i. of the patient should contra-indicate. *Where a retching has preceded, a vomit is so necessary,** that unless the humour be expelled, it produces several other different symptoms, not easy to be removed in the course of the cure, and highly dangerous to the patient. The principal and most common of these is a looseness, which generally happens in the decline of the fever, if emetics were omitted when they were indicated; for in the progress of the distemper, when nature has in some degree subdued the malignant humour in the stomach, and thrown it lower, it, by its sharpness, and the constant supply derived from above, so corrodes the intestines, that a looseness must necessarily follow. I have, however, observed in such inflammatory fevers, as are commonly called malignant, that though a vomit has been omitted, when retchings at first appeared, yet a diarrhœa does not necessarily follow, as it did in the present: but more of this hereafter.

A looseness happens if not given when required.

But not always, in malignant fevers.

* *Where a retching has preceded, a vomit is so necessary, &c.* Our author imagines that the great use of an emetic is the expelling the offensive humour, whose retention occasions a number of mischievous symptoms, particularly a diarrhœa. But this should rather arise from determining the flux of humours to the skin, and thereby keeping the bowels more free from any stimuli, which by crowding inwardly might be occasioned; particularly when they had, during the continuance of the fever, acquired an irritating acrimony; for it cannot be supposed that the identical humour which at first produced the disorder should lodge in the stomach, notwithstanding the quantity of liquids and medicines taken during the course of the fever, till its decline, in such an unaltered state so as to occasion a looseness: a purge would equally have obviated this difficulty; but we find experience evinces that it is from vomits alone that this distressing symptom is prevented, and when present by them chiefly relieved. *W.*

10. Now the danger of this diarrhœa lies Chap. 4. here, that it farther debilitates the patient, already sufficiently weakened by the disease, and, Danger of the looseness. what is still worse, happens in the decline of the fever, when the blood ought to collect itself, and exert its force to finish the business of depuration, but is hindered by this evacuation.

11. What makes it still plainer, that this humour lodged in the stomach, if not discharged by a vomit, may bring on a looseness afterwards, is that, upon examination, we scarce find any instance of a looseness attending this fever, but where the patient was apt to vomit at the beginning, and an emetic was not given: as, on the other hand, though this inclination to vomit be over, yet the looseness generally stops upon giving a vomit, provided the patient be strong enough to bear it: and I have frequently observed, that upon the coming on of a looseness in this case, astringents, either Generally checked by a vomit. internally or externally given, have very little, Astringents ineffectual. if any force in stopping it.

12. *The emetic I generally used was of this kind.**

* *The emetic I generally used, &c.* The emetics made use of at this day are perfectly free from that danger here complained of, and are exhibited in different modes—ipeca-cuanha, from twenty to five and twenty grains alone, or joined with a grain, or half a grain of emetic tartar; tartarified antimony given in such doses as immediately to vomit, or in divided doses till the effect is produced; or a grain, or grain and an half, administered in a perfectly neutralized mixture of kali prepared, and lemon juice two ounces, mixed with six ounces of some simple water, and sweetened with a little syrup. Nor is there any occasion to procrastinate the exhibition, an emetic may be given at any time, the sooner the better, and the operation will be gentle enough if the patient is ordered to take a quart of water gruel, &c. some little time before. *W.*

Sect. 1.
 A vomiting
 draught.

Take of the infusion of *Crocus metallorum*, otherwise called *vinum benedictum*, six drachms, oxymel of squills, and compound syrup of scabious, each half an ounce: mix them for a vomit.

I directed it to be given in the afternoon, two hours after a light dinner; and to make it work the safer and better, ordered three quarts, or a gallon of posset-drink to be in readiness, because this kind of emetic is dangerous, unless plentifully diluted; and therefore as often as the patient vomited, or purged, he was directed to take a draught of the posset-drink, by which means griping was prevented, and the vomiting rendered more easy.

Vomiting
 of admirable
 service.

13. When I have happened sometimes carefully to * examine the matter here thrown up by vomit, and found it neither considerable in bulk, nor of any remarkable bad quality, I have been surpris'd how it should happen that the patient has been so much relieved thereby: for as soon as the operation was over, the severe symptoms, viz. the *nausea*, anxiety, restlessness, deep sighing, blackness of the tongue, &c. usually abated, and went off, so as to leave the remainder of the disease tolerable.

* When I have happened sometimes carefully, &c. Had SYDENHAM been acquainted with the full effects produced by emetics, his wonder would have ceased; but he seems to have considered them only as evacuating the stomach, and therefore expected to see the *res ejectæ* either copious in quantity, or much altered in quality from their natural appearance in an healthful state; he was not aware of the sympathetic affections which take place in the constitution, nor knew that an extremely small portion of morbid matter could produce effects so sudden, and surpris'ing, from local action, so as to derange the whole system. W.

14. We

14. *We should not omit, that if the state** of the patient requires both bleeding and vomiting, it is safest to bleed first, and give the vomit afterwards; otherwise there would be danger that, whilst the blood-vessels are greatly distended, the violent motion in vomiting might burst the vessels of the lungs, or hurt the brain, and occasion a vomiting of blood, or a mortal apoplexy: of which I could give some instances, if it were proper, but my design is only to caution.

Chap. 4.

Bleeding to be first used, if also required.

15. As to the time of giving a vomit, I would have it done at the beginning of the fever, if possible, in order to prevent those terrible symptoms arising from a collection of humours in the stomach, and parts adjacent; and thus, perhaps, the distemper may be crushed in the beginning, which might otherwise increase, and prove both obstinate and dangerous, whilst supplied by these humours, which, entering into the recesses of the body, may mix with the mass of blood, or, growing more corrupt by longer continuance, communicate a malignant quality thereto. We have an instance of this in the *cholera morbus*, where, if we sometimes unseasonably endeavour to stop the vomiting, either by *laudanum*, or astringents, and the attempt succeeds, we bring on a no less dangerous train

A vomit, when to be given.

Vomiting not to be stopped unseasonably in the *cholera morbus*.

* *We should not omit, that if the state, &c.* This observation should never be forgot, as it is replete with prudence and sound judgement, founded, we find, on fatal experience; for certainly the danger in giving vomits in plethoric habits, under those circumstances particularly, is extremely great, and very likely to produce the pernicious consequences our author has enumerated; reason and experience here cooperate in the confirmation. *W.*

Sect. 1. of symptoms. For the acrimonious and corrupt humours, which ought, in some measure to be discharged, being by this means detained, exert their force upon the blood, and raise a fever, which usually proves of a bad kind, and is accompanied with dangerous symptoms, so as scarcely to be removed without giving a vomit, even though the patient has then no tendency to such an evacuation.

16. But if, as it frequently happens, the physician is called so late, that a vomit cannot be given at the beginning of the fever, yet I should judge it proper to give one at any time of the distemper, provided the patient is not too weak to bear it. I have successfully ordered an emetic on the twelfth day of the distemper, even though the spontaneous retchings were over; and by this means have stopped the looseness that hindered the blood from finishing its depuration, and I should not scruple attempting the same later, if the strength of the patient permitted.

An opiate to be given in the evening.

17. *In the evening, after the operation,** I always endeavour to quiet the disturbance raised in the juices by the emetic, and to procure sleep; and therefore direct a paregoric draught

* *In the evening after the operation, &c.* Dr. SWAN inveighs against the use of opiates here, considering them as pernicious. If the vomit given should have raised much disturbance in the system, I can see no reason in this case why a gentle opiate might not be administered: Experience had taught our author its use; and Dr. MACBRIDE, even after a purge, gives fifteen drops of tinctura opii, with thirty or forty drops of spirit of nitrous æther, in any convenient vehicle, as a paregoric; which composes the patient, and serves to assist in taking off the general spasmodic constriction of the small vessels, which are considered as their immediate cause.—*Methodical Introduction to the Theory and Practice of Physic*, p. 306. W.

to be taken at bed-time after the following Chap. 4.
manner :

Take of the distilled water of red poppies, two A quieting draught.
ounces ; aqua mirabilis, two drams ; syrup of
white and red poppies, each half an ounce :
mix the whole for a draught.

18. But if there be no danger in raising* too Or a large dose of diascordium.
great an effervescence in future, either on ac-
count (1.) of plentiful bleeding, used in the
course of the cure ; (2.) frequent vomiting or
purging upon the use of an emetic ; (3.) the
present disappearance of the fever ; (4.) its mild-
ness ; or (5.) its natural decline ; then instead of
the draught above set down, I give, without
apprehension, a sufficiently large dose of diaf-
cordium, either alone, or mixed with some cor-
dial water : and this is an excellent medicine,
provided it be given in a suitable quantity.

19. Under the article of vomits, we should Vinum benedi-
dictum unsafe
in children
under four-
teen.
not omit to observe, that it is by no means safe,

* But if there is no danger of raising, &c. SYDENHAM
speaks here with apparent confidence, on the utility of a
sufficiently large dose of diascordium, but has not specified
the quantity. If a grain of opium is meant for an adult,
the portion of the electarium e scordio necessary to be given
is three drams—a nauseating dose indeed ; and I am of Dr.
SWAN's opinion in preferring the moderate use of a grateful
wine, as it would be an efficacious cordial, without the in-
conveniences attending the other ; and particularly if the
cases here described, as seems probable, should be in that
state when the fever was overcome ; for certainly natural
rest, which people are apt to fall into after the febrile seces-
sion, is much more refreshing than that procured by opiates :
though in some delicate constitutions, where hysteric affec-
tions, at this period, are apt to take place, or the patients
are oppressed with grief, or pass many restless nights, opi-
ates, by raising the spirits, and procuring sleep, are of infi-
nite use ; and may, with great safety, be had recourse to,
in small quantities. W.

Sect. 1. at least in this fever, to give such as are made with the infusion of *crocus metallorum*, even in the smallest quantity, to children under the age of fourteen. It were indeed to be wished, that, instead of this emetic,* we had others of a safer kind, yet so sufficiently efficacious, as thoroughly to discharge the humour, which, in the decline of this fever, generally brings on a looseness; or at least were possessed of some proper remedy for changing or dissolving this corrosive matter, and blunting its force, so as to hinder it from producing a diarrhœa. It has often been a difficulty with me, when called to infants and children in a fever, and observing an emetic indicated, whereby they might have been preserved from danger, that I durst not give this infusion for fear of a bad consequence; but in grown persons I have hitherto found no ill effect from it, provided it were given with the cautions abovementioned.

* It were indeed to be wished, &c. This difficulty is at present removed, for either ipecacuanha, or antimonium tartarifatam, in properly proportioned doses, are given to very young children daily, particularly the latter, without any hazard; but we must observe, that all loosenesses in febrile disorders ought not to be stopped, for they are sometimes, though perhaps not very commonly, *critical*; if therefore, on their accession, the febrile affections begin to abate, the heat becomes weaker, the pulse more equable and slower, the thirst less troublesome, the urine foul, or depositing a copious sediment, with a softness or gentle moisture of the skin, and an abatement of other concomitant symptoms, they should be suffered to continue within moderate bounds, and the patient supported by nutritive liquid food, and gentle cordials; for checking them altogether suddenly might give rise to the renewal of the mischief, now in a train to be subdued. W.

20. When

20. When the affair of vomiting is over, I next consider, Chap. 4.

(1.) *Whether, notwithstanding the preceding evacuations,** the blood may not still hurry on so fast as to require a check; or,

(2.) On the other hand, whether it may not languish so much as to require quickening; or, lastly,

(3.) Whether the fermentation is now brought to such a proper state or degree, as that it may be safely left to itself.

Some-

* *Whether, notwithstanding the preceding, &c.* The three inquiries here specified, according to our present theory, should stand as follows:

1. Whether the re-action of the system still continues so violent as to require moderating.

2. Whether debility does not begin to be so prevalent as to require stimulating.

3. Or, Whether the natural tone, and irritability of the vascular and nervous system, are in such a proper state or degree, as that they may be safely left to themselves.

Each of which will be pointed out by the symptoms to which we must have recourse, as our principal directors.—In the first of these instances SYDENHAM prefers the use of glysters—Dr. SWAN, though he allows this mode very good, speaks in favour of purges, and supports that opinion by the authority of Dr. LANGRISH. A purge, stronger or weaker, according to the violence of the symptoms, their peculiar nature, and the strength of the patient, is in general greatly to be preferred; for the heat of the fever renders the contents of the intestines very fœtid and acrimonious, the secretions of the liver, pancreas, &c. are often disturbed both in quantity and quality, and the digestion very imperfect; hence the present intestinal contents ought to be removed at least; and though bleeding cools and relieves more immediately than purging, yet purging does it in a lasting manner, and disposes to quiet natural sleep—(*Mod. Theory of Physic*, p. 174, &c.) But to purging there are also several objections—first, as it may induce a considerable degree of debility; hence where a dangerous state of debility

Sect. 1.

A glyster to
be given oc-
casionally.

Something must be said to each of these cases.
21. (1.) If the blood hurries on so fast as to
give a just suspicion of a delirium, or other bad
symptom coming on, the day after the emetic I
generally prescribe a glyster.

*Take of the common decoction for glysters, one
pint; syrup of violets, and brown sugar, each
two ounces: mix them for a glyster.*

This glyster I order to be repeated occasion-
ally, by which means the blood is often so re-
freshed and cooled, as sufficiently to check its
effervescence. It sometimes likewise becomes
necessary to repeat bleeding once or twice; as
particularly in persons of a very sanguine consti-
tution, and in the prime of life, or such as have
inflamed their blood by using wine too freely;
though there is seldom occasion for so capital a
remedy as repeated bleeding, and therefore glyf-
ters may suffice to check the effervescence, ex-

lity is likely to occur, it should be employed with a great
deal of caution, and more especially as the due measure of
evacuation is difficult to be applied. Secondly, as it in some
measure takes off the determination of the blood to the ves-
sels of the surface; which determination is of great import-
ance in the cure of fevers. And lastly, where moderate
evacuation has appeared to be useful; it is apprehended to
have been only by taking off the irritation of retained fæces,
or by evacuating corrupted humours which happened to be
present in the intestines. (*Cullen's Practice of Physic*, Sect. 1.
p. 200, 201, 202.)—Glysters therefore seem to have, for
obvious reasons, the pre-eminence, as they may be equally
serviceable, and are free from the disagreeable consequences
which may attend purging: but as frequent ridiculous ob-
jections are made by patients to glysters being often repeat-
ed, lenient laxatives, whose stimulus is confined to the in-
testines, without being communicated at the same time to
the rest of the body, or saline aperients, may be properly
employed. *N.*

cept

cept in the cases just now mentioned. If there-
 fore the effervescence of the blood be too high, I order a glyster to be injected every day, or every other day, as the case requires, till about the tenth day of the distemper. Chap. 4.

22. But when a large quantity of blood has been taken away, or the patient is in years, I at this time order no glyster, though the effervescence of the blood should be considerable : for, in these cases, as we need not fear its rising so high, without the use of glysters, as *to bring on any great and dangerous symptoms* ;* so, on the other side, it is certain that *the strength and texture of the blood may be so impaired* † and relaxed by the use of them, as thus to disturb and hinder the procedure of nature, especially if the patient be in years ; for glysters do not succeed so well in the old as the young. But if only little blood has been taken away, then, as was said before ; I continue the use of glysters to about the tenth, and sometimes to the twelfth day ; as particularly when I durst not bleed at all : for some persons are seized with a continued fever after

* *Great and dangerous symptoms, &c.* This is contradicted by practice, and here his theory seems to have misled him. There are many bad febrile symptoms with a weak pulse.

† *The strength and texture of the blood, &c.* What our author means by this expression, and those similar, which occur so frequently in his writings, is not easy to conjecture. This mode of reasoning is more in conformity to his theoretic notions than founded on truth ; where it is necessary to empty the bowels from time to time, as occasion requires, glysters are infinitely more safe than any other mode, inasmuch as they weaken the habit less, and we presume the prohibition depends more upon the debility of the system than

Seft. 1. after an autumnal intermitten, whether tertian or quartan, for want of purging at the clofe of the preceding diftemper; and if blood fhould be taken away in this cafe, there is danger of the fediment, deposited in the former fermentation, being re-abforbed into the mafs of blood, and occafioning fresh diforders. Inftead of bleeding therefore in fuch cafes, I continue to ufe glyfters to the 12th day, if the patient be young, and the fermentation too violent.

23. (2.) On the other hand, whether bleeding has been ufed or not, if the effervescence of the blood finks too low, and requires raifing in order to affift nature in her work; in this cafe I judge that no glyfter fhould be injected even before the 10th day, and much lefs afterwards. Otherwife we might thus farther check the fermentation, now already too languid of itfelf. But to ufe glyfters after this time, *viz.* in the decline of the diftemper, would be as abfurd, as to flop the fermentation of wine, before the depumation was performed, by opening a large vent-hole: for a glyfter here would hinder nature in her vigorous endeavour to throw off the morbid matter.

24. But when once the patient is out of danger from thofe fymptoms arifing from too great an ebullition, either by means of proper and feafonable evacuations, or that the difeafe begins to decline, *the more coftive he is kept, the*

than any other caufe; and our conduct fhould be regulated more by *the ftate of fymptoms, and thofe particularized*, than the days; for at whatever period of the difeafe the *vis vitæ* acts too powerfully, it fhould, by proper means, be checked; and when too languidly, all debilitating modes fhould certainly be omitted, for very obvious reafons. *W.*

mere

more secure I judge him; * the febrile matter then proceeding more kindly and gently to concoction. And, therefore, if the preceding evacuations should either actually dissolve, or tend to dissolve, the mass of blood, or the fever go off before its due time, or before it is come to its full period, I not only refrain from the use of glysters, but also call in the assistance of cordials, and directly endeavour to prevent a purging. Chap. 4.

25. *Cordials, as I have experienced, †* when given too soon, do mischief, and unless bleeding has preceded, may derive the crude matter of the distemper upon the membranes of the brain, the *pleura*, &c. and therefore I never give them when either no blood, or very little has been taken away; or when no other considerable evacuation has been made; or the pa- Cordials, when to be given.

* *The more costive he is kept, &c.* Experience verifies this proceeding, for in cases of extreme weakness a single stool is dangerous, and in less degrees purging is improper; unless it appears that any preternatural irritation is kept up by the means of acrimony from offensive matters lodged in the intestines, then the symptoms alone will direct us to remove the cause, by clearing them cautiously of their contents. Cordials or blisters here seem the necessary assistants to increase vascular and nervous action, promote the completion of the curc, and render it more perfect. *W.*

† *Cordials do mischief when given too soon, &c.* Of this there can be no doubt, for whilst there is strength enough in the constitution to promote a due circulation of the fluids, cordials, by increasing that power, contribute prejudiciously to heighten the force of re-action, and bring on various mischiefs; according as local predisposition may be prevalent in different parts of the habit. But if the power here spoken of should be too weak, from whatever cause it arises, even in the beginning of the fever, it is certainly right, according to our author's opinion in the succeeding paragraph, to have recourse to them. *W.*

tient

Sect. 1. } patient has not passed the meridian life. For whilst the blood remains rich enough of itself, it should not be more enriched to the endangering the patient; nor does it require to be raised, so long as no remarkable evacuations have diminished its natural heat. Such kind of patients have cordials within them, which render external ones either needless or prejudicial, and therefore I here either use none at all, or those of the weakest sort.

26. But if the patient should be greatly weakened and dispirited by copious evacuations, or be in the decline of life, I usually allow of cordials, even in the beginning of the fever; and on the twelfth day, when the business of separation is at hand, I judge a freer use of the warmer medicines allowable; and they might be given earlier, if there be no danger of the febrile matter's falling upon the principal parts. For at this time, the more the blood is heated, the more the business of *concoction* is promoted.

27. *I cannot imagine what physicians* mean by their frequent precepts for giving remedies to*
pro-

* *I cannot imagine what physicians mean, &c.* It is obvious from this paragraph, and the subsequent one, that SYDENHAM closely attended to the operations of nature, and acted consistently with the notions of humoral pathology; he therefore waited on the common febrile process, and attempted to assist in promoting *concoction*, *despumation*, and *elimination*, whenever he observed nature defective in these points. Hence was there a time allowed for the proper elaboration of the morbid matter, which finished, was called *concoction*; afterwards succeeded *separation* or *despumation*; and lastly, the matter was to be thrown out of the body, and *excretion* or *elimination* took place; and hence with him fevers pursued their regular course: but this tedious plan may certainly in many cases, by judicious means early applied,

promote the concoction of the febrile matter, Chap. 4.
 which they often talk of in the beginning of the distemper, though at the same time they order only such medicines as may moderate the fever. For the fever itself is no other than the instrument of nature, by means whereof she separates the vitiated parts of the blood from the sound; though she does this in a manner perfectly imperceptible at the beginning, and even at the state of the distemper, but more

applied, be prevented; and such means as are adapted to remove their immediate causes, allowed to form the theory of this day. And these apply more to the state of the constitution, than to the nature of the morbid miasmata. If we take off the spasm of the small vessels, counteract the reaction of the system, and prevent their return, we form a speedy and complete cure; and these are done by bleeding, where necessary, vomiting, purging, antimonials, saline substances, and diluents; the prudent use of which will commonly, when applied in time, remove every obstacle, and free the constitution, so that it will soon return to a state of health;—we now advert to the fever here treated by SYDENHAM; so that within a few days, from the attack, all danger and future trouble will cease. And all this appears to be done in consequence of lessening the action of the nervous and vascular system, clearing the primæ viæ, giving a general shock to the system, determining the fluids to the surface, supplying tone to the small external vessels, by increasing the energy of the brain, and promoting a gentle diaphoresis; by which means the morbid matter is suffered to pass through the different emunctories, before it has time to fix itself in the habit; and, by a continuance of its action, alter the motions of the vascular and nervous system, or contaminate the fluids. This is generally to be accomplished only within the first three or five days, perhaps; but at a later period, we are forced to pay attention to the operations of the constitution, and regulate them through the natural course of the disease; for which purpose, our author deserves attention. *W.*—See also Cullen's *Practice of Physic*—Macbride's *Introduction to the Modern Theory and Practice of Physic*.

Sect. 1. manifestly in the decline thereof, as appears from
 the sediment in the urine. The concoction of
 the febrile matter here means no more than a
 separation of the morbid particles from the
 found, whence the way to hasten this concoction
 is not by moderating the fever, but the effere-
 vescence must be kept up so long as the safety
 of the patient will give leave: but when the dis-
 ease is in the decline, and the separation becomes
 manifest, warmer medicines should be immedi-
 ately given, in order to finish the operation with
 greater certainty and expedition. And this is
 properly promoting the concoction of the febrile
 matter; whereas I have frequently found that
 evacuations and coolers hinder the cure, and
 put back the recovery that was now approach-
 ing. But if the fermentation advances suffi-
 ciently, despumation will be finished about the
 fourteenth day; whereas if coolers are given too
 late, so as to check the effervescence, it is no
 wonder if the fever run on to the 21st day, or
 even much longer, in persons extremely weak-
 ened with ill treatment.

The con-
 coction of
 the febrile
 matter,
 what.

Despumati-
 on finished
 about the
 14th day.

28. *It is remarkable here** that, though the
 patient may sometimes seem to be a little relieved
 by the use of glysters, or other purgatives, un-
 seasonably directed about the decline of the
 distemper, and even, perhaps, to be totally

* *It is remarkable here, &c.* SYDENHAM seems here to
 have thought, that nature being disturbed in her operation,
 a new process was required totally to free the habit from
 the remaining miasma, consistently with his theory; but
 in the present practice it seldom occurs. Dr. SWAN attri-
 butes it to the free use of blisters, established since SYDEN-
 HAM'S time. I am rather led to consider it owing to the
 improved mode of treating fevers, and powerful effects of
 antimonial medicines. *W.*

freed

freed from the fever; yet, a day or two after, Chap. 4.
 it happens that the former fever does not so much appear to return, as a new one to arise; for chillness and shivering presently come on, and are soon followed by heat and a fever, which, unless it happens to degenerate into an intermittent, runs its course as already described. In this case the patient is to be treated in the same manner as if he had not had the fever before; for (how painful soever it may be to the patient, much weakened by the former disease, to wait so long for his recovery) the depuration consequent upon this new effervescence will not be performed in less than fourteen days.

29. I shall next set down the cordials which I ^{The kinds} generally use in this distemper, *the milder of* ^{to be used.} *which I employ at the beginning,* when the ebullition*

* *The milder of which I employ, when the ebullition is violent, &c.* - Here certainly can be no use for any, the system requires no stimulus of this sort; but, on the contrary, whatever can allay the too violent motion: cordials increase the power and force of the heart and vascular system, and may be divided into two classes—nutritive and stimulant: the first acts by supporting the strength; the second by stimulating the solids to greater force and freedom in the exertion of their motory power, and consequently accelerating the circulation; hence, in this instance, even the mildest must be extremely improper. Indeed much caution is necessary before we can venture to deal freely in any of the pharmaceutic cordials, or in wine, which is the most certain and durable in its effects; there are so many nice circumstances to be considered, which may either forbid or encourage their use. Only this may be observed in general, that where we have reason to suppose, from the heat and dryness of the skin, and from the excessive thirst and costiveness, that the spasmodic constriction has not at all given way, we should be cautious how we allow their administration; but if there appear a moisture on the tongue, softness of the skin, and a cloud in the urine, while the pulse becomes
 more

Sect. 1. *tion is violent*, and gradually proceed to the hotter, according as the fever, or the degree of ebullition requires; always observing, where bleeding was freely used, or the patient was in years, to administer those of a stronger kind, than when no blood had been taken away, or the patient was in the vigour of life.

The milder and stronger cordials enumerated.

30. The milder cordials I mean are such, for example, as are made of the distilled waters of borage, citrons, strawberries, the compound scordium water, with a mixture of the syrup of balm, cloves, or juice of citrons, &c. But the stronger are *Gascoin's* powder, bezoar, confection of hyacinth, *Venice* treacle, with others of the same kind. The following prescriptions were frequently used.

Forms of cordials.

Take of the distilled waters of borage, citron, black cherries, and compound scordium water, each two ounces; barley cinnamon water, one ounce; prepared pearl, two drams; fine sugar, two ounces, or a sufficient quantity: mix them together.—Take four spoonfuls of this mixture often in a day, especially when faint.

Take of the distilled waters of the whole citron, and strawberries, each three ounces; the cooling cordial water of SAXONY, one ounce; treacle water, syrup of balm of FERNELIUS, and of the juice of citron, each half an ounce: mix

more calm and full, we may then conclude the spasmodic stricture is yielding, and assist nature by giving wine, strong wine whey, volatile alkaline salts or spirits, confection aromatica, radix serpentaria, and others of this class. Indeed our author has chosen such as possess a very scanty share of cordial power; but, however, even these at the beginning are much better avoided. *W.*

them

them for a julap; some of which is to be taken Chap. 4.
frequently.

Take of GASCOIGN's powder, oriental and occidental bezoar, and LAPIS CONTRAYERVA, each a scruple; a single leaf of gold; bring the whole into a fine powder, of which take twelve grains, as often as there shall be occasion, in syrup of the juice of citron and cloves, each two drams; drinking after it a few spoonfuls of the julap above directed.

Take of treacle water, four ounces; the seeds of citron, two drams; beat them together and make an emulsion: to the strained liquor add sugar sufficient to sweeten it to the taste.—Take two spoonfuls of it thrice a day.

It would be needless to add any more forms of medicines, because a great number are, or may be, of use in the course of the distemper, and require to be varied according to its different stages, and the different symptoms arising therein.

31. (3.) But when the fermentation neither ^{Remedies} rises too high, nor sinks too low, I leave it in ^{when} that state, *without prescribing any medicines,* * ^{needless.} unless

* *Without prescribing any medicines, &c.* It is much to be lamented, that such is the genius of the times, that physicians are often under the necessity of acting contrary to their own wishes, more from the importunity of folly, than the impulses of judgement; in order to escape the imputation of ignorance or inattention. The timidity and fretfulness of patients; the anxious solicitude of friends; the impertinence of gossips, who, not knowing any thing, judge of all things; drive the medical pen into action, which moves not to cure, but please. If the patient's mind can be kept at ease by these means, *placebos* may be his refuge; and on this account, and this only, ought he to submit;

Sect. 1. less forced to it by the importunity of the patient, or his friends; and then I direct such only as may please without prejudicing.

Persons in low circumstances, how to be treated.

32. I should not omit, that frequently when I was called to persons of low circumstances, I ordered them to do nothing else, after bleeding and vomiting when required, but to keep in bed during the whole course of the distemper, and to sup only water-gruel, barley-gruel, and the like; *to drink moderately of warm small beer* * to quench their thirst, and to take a glyster of milk and sugar every day, or every other day, till the tenth or eleventh day of the distemper; but towards the end of the fever, when the separation was begun, and proceeded slowly, to promote it, I allowed them now and then a little stronger malt liquor, instead of cordials. And thus without any thing further, except a gentle purge at the end of the distemper, they generally did well.

for quietude of mind in the patient, and confidence in his physician, are requisites essentially necessary for his speedy recovery; and it is certainly more humane and useful to attempt satisfying the indisposed by whimsical indulgence, than disturb them by honest pride, or injudicious integrity. *W.*

* *To drink moderately of warm small beer, &c.* Clear old small beer, neither bitter nor sour, will agree very well with those who have no *nausea, sickness at stomach,* nor *tendency* to a looseness. Where the symptoms are moderate, and where the blood is not too much rarefied, to deny small beer to be taken now and then moderately, is a needless severity, and very often hurtful, especially where it has always been used as the common diluter of the food. But in others, whose vital powers are wound up to the highest pitch, small beer will not agree; because, however small, it contains a portion of spirit, which, by its briskness, will irritate the *fibrille* into more frequent and strong contractions, and render the patient delirious if not so before.

33. If the method above delivered was care-
 fully observed, I commonly, *about the fifteenth* Chap. 4.
day, found it proper, from the laudable separa-
 tion in the urine, and a manifest abatement of A purge,
 all the symptoms, *to order a purging potion* * when to be
to drain off the sediment deposited upon particular given.
 parts by the preceding fermentation; and unless
 this was seasonably done, that sediment might
 return into the mass of blood, and occasion a re-
 turn of the fever; or, by its continuance in the
 parts where it lodged, produce obstinate disor-
 ders in the body. For the separation being now
 over, the gross and vitiated humours, transmit-
 ted from the arteries to the veins, easily prevent
 the return of the blood, whence various kinds of
 obstruction, and, at length, new ferments arise.

* *About the fifteenth day to order a purging potion, &c.*
 Though our author's theory here is very prevalent, and
 reasons assigned for its necessity are, without doubt, the
 offspring of fiction, still we must allow the practice proper
 and judicious; for from the disturbance which has been
 raised in every part of the constitution by the preceding
 illness, the irregularity of the secretions and excretions,
 the supernatural heat and motion it has experienced, natu-
 rally render the blood acrimonious, and leave different
 parts of the habit, particularly the viscera and glandular
 system, in a debilitated state, from whence these particular
 humours cannot be supposed to be so perfect as they ought,
 nor the glands capable of performing their functions pro-
 perly; of course, therefore, they will be overloaded with
 fluids not in a very healthful state. Purgings, therefore, as
 it tends to clear the whole habit, and increase visceral and
 glandular action, is highly proper to evacuate any peccant
 matter, whilst with proper diet, exercise, &c. the fluids
 of the constitution may be meliorated and renewed, and the
 habit in general recover its usual force and action. *W.*—But
 the reader will meet with some judicious observations on
purging, well worth his reading, in Langrish's *Modern The-*
ory of Physic; *Glass de Febribus*, and in Dr. Barker's *Essay*
on the Agreement between the Ancients and Modern Physicians.

Sect. 1.

When less
necessary.

34. But it may be here observed, *that purging is not so necessary after vernal,** as after autumnal fevers, because the sediment deposited by the former is neither so copious, nor of such an earthy malignant nature as in the latter; *which holds also in the small pox,†* and many other distempers that rage in the spring; so that here, as far as I have observed, it is not so dangerous to omit purging, as in the cases beforementioned. And it seems to me, that more distempers arise from an omission of purging after autumnal disorders, than from any other single source.

35. If the patient happens to be very weak, or the depuration not perfectly performed, so as to render it unsafe to give a purge on the fifteenth day, I defer it to the seventeenth, and then prescribe the following, or the like, purging potion, in proportion to the strength of the person:

A purging
potion.

Take tamarinds, half an ounce; the leaves of sena, two drams; rhubarb, one dram and a half; boil them together in a sufficient quantity of water, so as to leave three ounces when strained off; in which dissolve manna and syrup of roses, of each one ounce: mix the whole for a purging potion to be taken in the morning fasting.

36. I always order the patient to keep his bed till he is purged, then permit him to rise, and by degrees return to his ordinary way of living.

* *That purging is not so necessary, &c.* The practice may be good, but the theory cannot be commended.

† *Which holds in the small pox, &c.* This practical direction is absolutely contradictory to experience; one would wonder how so careful an observer could be led to affirm this; but his theory seems to have prevailed here.

The

The diet I order to this time is nearly the same Chap. 4. with that abovementioned; as water-gruel, barley-gruel, panada made of bread, the yolk of an egg, water and sugar, thin chicken broth, small beer, to which, when the fever is high, a little fresh juice of oranges may be added, it being first just boiled over the fire to take off the rawness, with the like; though water-gruel may serve for them all. But to forbid the drinking moderately of small beer is a needless severity, and often pernicious.

The diet to be used upon recovery.

37. It sometimes happens, especially in the aged, that though the fever is cured, and the body perhaps rather too much purged, *that the patient still remains very weak*;* and with coughing or spitting, expectorates a large quantity of viscid phlegm: a symptom terrifying not only to the patient, but also to the physician, if not apprized of it, who might otherwise mistake it for a beginning consumption: though I have found it not very dangerous. In this case I order a glass of old *Malmsey*, *Falernian*, or *Frontignac*, with a toast; which, by strengthening the texture of the blood, (much weakened by the preceding fever, and therefore rendered unfit to assimilate the juices of the aliment lately taken) removes

A cough at the decline, how to be relieved.

* *The patient still remains very weak, &c.* Wine is certainly a good and proper restorative, and well calculated to remove those complaints which have been brought on by the severity of the febrile affection, and induced local as well as general debility; but these soon give way to proper diet, such as is nutritious, given at intervals, and in such small quantities, as can be quickly digested, for more does infinite harm, and lays the foundation for a variety of complaints, by loading the constitution, already in too debilitated a state, with crude juices, which it cannot assimilate: and in order to expedite recovery, slight chalybeates, with bitters, and riding on horseback, are highly conducive. *H.*

Sect. 1. this symptom in a very few days, as I have found
by repeated experience.

Malignity
and the scurvy
unjustly
accused.

38. By the method here laid down, the patient will be preserved from several symptoms and disorders usually ascribed to malignity; nothing being more common with unexperienced physicians, than to lay the blame on malignity, when, by too cooling remedies, or the unseasonable use of glysters, they have weakened the texture of the blood, and reduced nature so low, whilst she was performing the office of separation, as to bring on faintings, and other bad symptoms, which are the genuine effects of such perverted rules of art: but if the long continuance of the disease should wipe off this aspersions of malignity, whatever afterwards obstructs them in the cure, they impute to the scurvy; though in reality the symptoms that happened in the height of the disease were neither owing to malignity, nor those that appear in the decline, to the scurvy, but both of them to wrong management, as I have frequently observed. Not that I, nor any other physician, who is acquainted with the history of diseases, will say that there are no fevers of a malignant nature, for there are manifest signs of such; nor will I deny that a fever may be sometimes complicated with a scurvy and other disorders; but what I assert is, that both malignity and the scurvy are here frequently blamed without reason.

Coolers and
glysters
given too
late, prolong
the disease.

39. When the fermentation of the blood proceeds in a proper manner, the despumation of the morbid matter will be finished in the time abovementioned; but if cooling medicines, or glysters, are given too late, the fever will run to a much greater length, especially in aged persons

persons that have been improperly treated. When Chap. 4.
 I have sometimes been called to such, after they
 have struggled with the fever above forty days,
 I have used my utmost endeavours to procure the
 despumation of the blood, which was now so far
 weakened, partly by age, and partly by glysters
 and cooling medicines, that I could not obtain
 the end proposed, either by cordials, or any
 other strengthening remedies; but either the
 fever maintained its ground, or, if it seemed to
 go off, *the strength of the patient was almost quite
 exhausted.**

40. But when other means failed me, I have
 made use of a singular expedient with great suc-
 cess, namely, the application of the heat of
 strong and healthy young men: nor will it be
 found surprising, that by this uncommon means
 the patient should be considerably strengthened,
 and debilitated nature assisted, so as to disburden
 herself, and throw off the remains of the mor-
 bific matter; for it is easy to apprehend that a
 considerable quantity of sound and wholesome
effluvia will thus pass from a robust, healthy bo-
 dy, into the exhausted body of the patient; and
 I have never found the repeated application of
 warm napkins to prove near so serviceable as
 the present method, where the heat applied is
 not only more natural to the human body, but
 also more mild, moist, equable, and constant.
 And this way of transmitting, perhaps, balsamic

Good effects
 of applying
 the heat of
 young men.

* *The strength of the patient was almost exhausted, &c.*
 Blisters here are of principal use; to which we may add
 bark joined with cordials, and wine given in pretty large
 quantities; for the cause here appears to be excess of debi-
 lity from the strength of the constitution being impaired
 so greatly by the long continuance of the disease. W.

Sect. I.

Spirits and exhalations into the body of the patient, however quaint it may seem, has also since been successfully used by others. *Nor do I think it below me to have** mentioned this expedient, whatever censure it may expose me to, from such as contemn whatever is vulgar; as judging the health and benefit of mankind ought to be preferred to their false opinion of things.

Some symptoms here require a particular treatment.

41. By carefully pursuing the method hitherto delivered, the greater part of the bad symptoms, that either accompany, or follow upon this fever, will be prevented, which otherwise, in the course of the cure, frequently perplex the physician, and prove fatal to the patient, though the disease itself should have no such destructive tendency. But as such accidents are common, if the physician comes too late, be negligent, or unskilful, I will here briefly treat of the cure of those symptoms, which, when they happen, require a peculiar treatment, though they might generally have been prevented, by keeping close to the above-mentioned method.

Method of treating a delirium.

42. And, first, *if a delirium be occasioned, †* either by the too early and unseasonable use of heating

* *Nor do I think it below me, &c.* This conduct does great honour to SYDENHAM, and should be maintained by every physician. The contempt of vulgar prejudices bespeak a noble disinterestedness, and where the health and benefit of mankind can be procured by any means, those means should be adopted: be they ever so incongruous to the opinion of the world, the reflection of the utility will amply compensate him, and time, amidst the calumny of fools, at last elevate him in the opinion of the discerning. *W.*

† *If a delirium be occasioned, &c.* The cause of this symptom should be investigated with great perspicuity, as it may arise from different sources; either from too violent

re-

heating medicines, or the patient's being naturally of a hot constitution; or, which is nearly the same, if he has constant watchings, raves, speaks hastily, looks wild, takes his medicines, or rather liquids eagerly, or has a suppression of urine: in this case I bleed more freely, order glysters and cooling medicines, particularly in the spring, at which time such as are young and florid, though free from this symptom, may be treated in the same manner, without much danger.

Chap. 4.

43. By these means I endeavour to support the patient, till the disease is run to a certain length, when I find it easy to take off both that and the delirium, by a large dose of some opiate; for anodynes properly given in the decline are very beneficial, whereas they prove of no service whilst the fever is high, though given in the largest dose, as being unable to stop the violent course of the fermentation; but chiefly because the peccant matter, then equably mixed with the blood, and not ripe for separation, is

Taken off by
an opiate.

re-action of the system, or too great debility; an inflammation of the brain or its membranes, &c.—In an acute fever, should it be accompanied with a full, quick pulse, bleeding in the jugular vein is proper to lessen the pressure on the brain, and divert the blood to the extremities; fomenting the internal parts of the thighs with warm fomentations, or vinegar and water; bathing the feet and legs in warm water should be had recourse to; or stimulating plaisters or cataplasms applied to the feet—Antimonials joined with nitre may be given with advantage, or whatever can abate the heat and tension of the nerves, remove the spasmodic constriction, or blunt the stimulus; but if it is accompanied with a weak, slow, and irregular pulse, indicating debility in the system being prevalent, blisters are proper, warm stimulants, and all nervous medicines; opiates excepted, for these are in this case very unsafe. *W.*

confined,

Sect. 1. confined, whence the expected depuration is hindered. Whether this be the reason of the thing, or it proceeds from some more latent cause, I leave to the determination of others.

Cautions at
the time of
giving it.

44. This, however, I can affirm from numerous observations, that laudanum, or any other narcotic used to take off this symptom, whether in the beginning, increase, or height of this fever, was either ineffectual or prejudicial; whereas a moderate dose in the decline proved successful. I once ordered a narcotic upon the twelfth day of the disease, with success, but never knew it given sooner with advantage; and if it be deferred to the fourteenth day, when the separation is more perfect, it will prove still more beneficial. For I have frequently observed, that the delirium may be disregarded, till it is proper to give an opiate, provided the disorder be not increased by the use of cordials, and heating medicines, which may here prove mortal. The opiates I usually prescribe, are either *London Laudanum** to a grain and a half, or the following :

Forms of
opiates.

*Take of cowslip flowers, one handful, boil them in enough black cherry water to leave three ounces, when strained off, to which add syrup of white peppies, half an ounce; juice of lemons, half a spoonful; mix the whole together. Or,
Take of black-cherry water, one ounce and a half;*

* *Either London laudanum, &c.* One grain of opium is a common dose; *tinctura opii camphorata*; or *tinctura opii* may be given in any of our simple waters in present use; such as those of pepper-mint, cinamon, or penny-royal; what are prescribed by SYDENHAM being thrown out of practice. *W.*

plague-

plague-water, two drachms; liquid laudanum, Chap. 4.
sixteen drops; mix them together.

45. It may be proper to add, that if this system be not very urgent, and the fever be prolonged, so as that the patient may be safely purged before an opiate is given, it will then be attended with greater success. And therefore I usually direct two scruples of the greater *Pil. cochia*,* dissolved in betony water, to be taken ten or twelve hours before the opiate; and thus the disturbance this warm purgative might otherwise occasion will be prevented by the opiate, and an agreeable sleep procured. But if the watching continues after the fever, and the other symptoms are gone off, I have known a piece of linen dipt in rose-water, and applied cold to the forehead and temples, prove of greater service than any kind of opiate.

To be preceded by a purge.

46. It is usual for the patient to be afflicted with a bad *cough* during the whole course of the disease, arising from the violent commotion of the blood, whereby the juices being broke, are separated from the mass, in its circulation through the pulmonary vessels, and thrown upon the internal membrane of the *trachea*, which is of a fine texture, and extremely sensible. The cough is first dry, the matter being then too thin to be expectorated; but the febrile heat gradually thickens it, and soon renders it more tenacious, whence it is with difficulty expectorated; and becomes apt to cause a suffocation, for want of sufficient strength in the patient to discharge it.

Treatment of a cough.

* *Pilula cochia*. Extractum e colocynthide compositum; pilulæ ex aloe c. myrrha, or rhubarb may supply its place; the latter is most eligible. *W.*

Sect. 1. In this case I seldom use any other medicine than fresh-drawn oil of sweet almonds, unless, as it sometimes happens, the patient has an aversion to oil, and if so, I endeavour to relieve him by the common pectorals. Otherwise I prefer the oil of almonds to all other pectoral medicines, chiefly because to answer the intention they must be given freely, and in large quantities; whereby the stomach, already too weak, and subject to retchings, is overcharged; and, besides, we are sometimes by this means prevented from giving what is proper upon other accounts.

Oil of sweet almonds commended in this case.

Its disadvantages obviated.

How to be given.

47. Again, neither reason nor experience have yet convinced me that the use of this oil is not to be allowed in fevers, because it is *of an inflammable nature*,* and consequently may tend to increase the distemper; for granting it to be naturally hot, it is, however, certainly not so hot, but that the advantages arising from its use are greater than the inconveniencies. For it is an excellent pectoral, opens and lubricates the passages, thereby promoting expectoration, which, when copious, frees the blood from the noxious humour, now seasonably separated, and at the same time tends to cool; so that this symptom thus proves of considerable service, for which reason I am not anxious about it. Let it, however, be observed, that it is unsafe to give se-

* *Of the inflammable nature, &c.* This medicine is ranked very properly now amongst the class of emollients, externally; and amongst demulcents internally; and may certainly, in this case, be given with safety: mixed with the pulp of roasted lemon, and sweetened with sugar-candy, it is a pleasant, and not inefficacious remedy for relieving this uneasy symptom; besides it is very often taken more freely and willingly by the patient, from its not being considered an apothecary's compound. W.

veral

veral spoonfuls of oil of almonds at once, as Chap. 4.
 retchings and a looseness may thereby be occa-
 sioned; but the frequent use of it in small quan-
 tities, throughout the day and night, not only
 eases the cough, by promoting expectoration,
 but, which is very material, the patient, now al-
 most worn out, will be in some measure recruited
 by this kindly nourishment.

48. Sometimes a *bleeding at the nose* happens, A bleeding at
the nose, how
to be stopt.
 either from giving too warm medicines in the
 beginning of the fever, or from not sufficiently
 depressing the ebullition of the blood, the pa-
 tient either being in the prime of life, or the
 season of the year conspiring with the fever.
 Here the means commonly made use of to check
 the motion of the blood will be of little service;
 such as bleeding, ligatures, astringent, aggluti-
 nant, balsamic medicines, &c. though recourse
 may be had to these and the like helps, accord-
 ing as they shall be judged proper; but the prin-
 cipal thing is, to stop the violent ebullition of
 the blood by a proper medicine; though, in rea-
 lity, if this symptom be considered apart, the
 remedies above mentioned, and particularly
 bleeding, should seem to be serviceable therein;
 nor have I scrupled to use them; yet as they do
 not (bleeding excepted) strike sufficiently at the
 cause of this symptom, *viz.* the ebullition of the
 blood, it is imprudent to depend upon them;
 therefore, in this case, when all other means had
 proved ineffectual, *I usually gave the following
 draught :**

Take

* *I usually gave the following draught, &c.* So gentle
 an opiate does not seem likely to put a stop to a *bleeding at
 the nose*, where the above-mentioned means fail. If the
 hæmorrhage

Sect. 1.
A quieting
draught.

Take of the distilled waters of purslain, and wild poppies, each an ounce and a half; syrup of white poppies, six drams; syrup of cowslips, half an ounce; mix them together for a draught.

All hæmorrhages not to be immediately stopped.

49. But I judge it improper to put an immediate stop to every hæmorrhage after this manner; for it is frequently rather to be permitted, and may prove of great service, sometimes, by abating the too violent ebullition of the blood, and, at others, *by proving critical, put an end to the disease.** And, in reality, no considerable effect is to be expected from the above-mentioned remedy, unless the symptom has continued some little time, and bleeding in the arm preceded its use. Again it must be carefully remarked, that this and all other immoderate hæmorrhages are peculiarly apt to return, soon after a stop

hæmorrhage be violent, therefore, it will be proper to bleed in the jugular, set cupping glasses on the shoulders, apply cooling lotions to the head and parts adjacent, bathe the extremities in warm water when they are cold, blow a styptic powder up one or both the nostrils, as it shall be necessary, or put up a tent dipt in some styptic liquor. See Sect. vi. chap. vii. par. 8. Cooling emulsions, opiates, sub-astringent and nitrous medicines are to be given internally, and a spare, thin diet used. An upright posture, with the head bending a little forwards, is the best here. If the blood be acriminous, thin, and serous, agglutinants should be freely exhibited. In case of great weakness from the loss of blood refrain from opiates entirely, and direct mild cordials, a restorative diet, and rest.

* *By proving critical, put an end, &c.* Here we should act with the same kind of precaution as in the case of diarrhœa, for the same reasons; observing that the debility, should the sanguinary efflux not be critical, will be in this case more rapidly increased than in the former. See page 18, note 14.; for all sanguinary evacuations are more quickly debilitating to the habit than any other of the excretions supernaturally increased. W.

has

has been put to them, unless a gentle purge be given, which therefore must not be omitted, even though it should seem too early to purge, with respect to the stage of the fever, if this symptom had not happened

Chap. 4.

50. *The hiccup generally happens to the aged,** after an immoderate looseness, but chiefly after excessive vomiting, and frequently prognosticates imminent death, I ingenuously own that I have not been able to satisfy myself in my inquiry into the cause of this symptom; but I have frequently observed it to proceed from some disturbance raised in the stomach and adjacent parts by violent medicines, not without great danger to the patient, because nature is unable

An hiccup
how to be
treated.

* *The hiccup generally happens to the aged, &c.* When this occurs in the decline of fevers it is always a very dangerous symptom—HIPPOCRATES considered the stomach alone the seat; HOFFMAN, the diaphragm; though others are of the former opinion—It is generally the concomitant of extreme debility, and depression of spirits. Weak opiates have been recommended by some, joined with volatile fetid medicines; these may be used, but the proportion of the opiate should be very small, lest the depression of spirits should be increased, and a fatal stupor be the consequences. Antispasmodics, and gentle anodynes are to be preferred, particularly musk, which may be administered in doses of from ten to thirty, or forty grains, according to the urgency of the symptom; the efficacy of which may be improved by joining with it camphor and valerian.

Should it proceed from viscid or irritating matter lodged in the stomach, the offensive materials may be evacuated by clearing that organ by a vomit, if the strength of the patient will permit: a restorative diet, and prudent use of wine will give relief, if the cause be owing to depletion, or immoderate evacuations; if to excoriation, or inflammation from corrosive poison, or any similar stimulus, plenty of warm milk, and oil of almonds or olives frequently administered, and freely thrown up into the intestines, may produce happy effects. *W.*

Sect. 1. to check and quiet this commotion; and on this account I judged it proper to assist her by art, by giving a large dose of *diascordium*, viz. two drams, which seldom failed to remove this symptom, when the seeds of dill and other celebrated specifics had proved ineffectual.

A looseness
how to be
cured.

51. If, as above intimated, a looseness should happen in the course of the disease,* for want of giving a vomit at the beginning, when it was indicated by the retchings; one should be given at any time of the disease, provided the patient be strong enough to bear it, even though there be now no tendency to that evacuation. But as this has been largely treated in the foregoing pages, I shall only mention what is proper to be done, if a looseness should happen notwithstanding an emetic has been given; which is very seldom the case, except in an inflammatory fever, where this symptom, so far from being prevented, is sometimes occasioned by a vomit; which is an observation of consequence. And here I have found the following glyster more efficacious than any other astringents :

An astringent glyster.

Take of the bark of pomegranates, half an ounce; red roses, two pugils; boil them in a sufficient quantity of milk, so as to leave half a pint of

* If a looseness should happen, &c. We have spoken before of this symptom, and given some directions towards shewing how its nature may be distinguished, whether critical or not (page 18, note 14.)—We have now only to add, that if from the concomitant symptoms it should be suspected that too great debility is induced; if the pulse sinks; sickness and faintings come on; partial sweats; limpid urine, &c.; we must fly to cordials, diaphoretics, blisters, and diet the most nutritious; these are preferable to astringents, as they tend to solicit the flux of humours from the intestines, and invigorate the system. W.

Strained

of the Years 1661, 1662, 1663, 1664.

65

strained liquor, in which dissolve half an ounce of diascordium: mix the whole for a glyster. Chap. 4.

It is improper to inject a larger quantity of this glyster than is here directed, though it be naturally astringent; because the intestines may be oppressed by its bulk, whence the looseness will rather be promoted than checked.

52. But it may be said, that if a diarrhoea should appear, especially in the decline of the disease, it is better to encourage than stop it; as it is sometimes a critical discharge, and terminates the distemper. *This undoubtedly may sometimes be the case,** but it happens so rarely, as
not

Rather to be checked than encouraged

* *This may undoubtedly sometimes be the case, &c.* If so, we ought to be provided with the means of discovering, and also of aiding it when necessary; as the neglect of this circumstance may draw us into danger;—I was called in to a lady in St. Margaret's church yard, Westminster, who had, when I saw her on the third day of her being taken ill, the common symptoms of a continued fever, labouring under great heat, and thirst; dry skin; some uneasiness in her head, which had been preceded by alternate chilliness, and heat; her pulse was at that time 108; though quick, they were not full: I ordered her an emetic; and afterwards the saline mixture with antimonials; on the fourth day she was apparently relieved; her pulse more calm and slow; her head free from uneasy sensations, and a gentle diaphoresis had taken place; her urine was clear and high coloured; she had this day two stools: on the fifth her symptoms were somewhat aggravated; no stool this day: on the sixth, in the morning, she was much the same; I could find no perceptible difference: a glyster was given her, which produced one plentiful evacuation; and the kali vitriolatum added to her antimonial boluses: in the evening her pulse was not more than 98; though she had no moisture on her skin, still there was a softness in it: on the seventh, every thing wore a promising aspect, only she complained of some uneasy twitching, and a great motion of wind rolling in her bowels; she had that day no stool: on the eighth, her complaints

Sect. 1. not to encourage one to attempt it; besides, the reason before alledged, in treating of the cure of fevers in general, which tends to shew the necessity there is of stopping the flux, holds here also. And to this may be added, that in order to the genuine depuration of the blood, it is not only necessary there should be a secretion of some feculent parts, but there is further required a separation of others by way of *efflorescence*, as we daily see in other rich and heterogeneous liquors; consequently, if the looseness be too much promoted, the depuration will not be wholly completed, and perhaps the matter that ought to have been last expelled, will pass off first. I own, indeed, that after the separation by way of *efflorescence* is finished, which is usually performed gradually and insensibly, and by means of a freer perspiration, rather than of a manifest sweat, if then a looseness should happen, it would be attended with little danger; for it must be observed, that now it is only owing to a neglect of purging in time, whence the excrement, for want of being evacuated, contracting a kind of malignant ferment, irritates the intestines to discharge their contents; besides, the very liquid consistence of the excrement is a proof that the looseness ought not

complaints were similar with an increase of thirst; as she had no intestinal discharge the day before, a second glyster was ordered, which produced six or seven copious evacuations, and from that time she perfectly recovered. Besides this, I have seen other cases, where the constitution made this exertion by the intestines the means of relief; I cannot, therefore, submit to sacrifice facts to the reasoning of our author, which is inconclusive, and merely built upon hypothesis. *W.*

to be accounted a critical solution of the disease. Chap. 4.

53. Possibly the *iliac passion* * deserves to be enumerated among the symptoms consequent upon fevers, since it is sometimes occasioned by immoderate vomiting in the beginning of the disease. This terrible disorder, which has hitherto generally been esteemed fatal, *is owing to the inversion of the peristaltic motion* of the guts, whence their contents are forced upwards, and thrown out by vomiting, so that the strongest glysters become emetic, as do likewise cathartics, immediately after being taken: and I judge the exquisite and intolerable pain attending this disorder, proceeds only from the inverted peristaltic motion of the bowels, whose natural formation is such, as by their many folds to promote the descent of the fæces in the properest manner; and therefore whenever they are forced to yield to a motion opposite to that of their fibres, a pungent pain is occasioned, which remains fixed upon a particular part, when either the valve placed at the beginning of the *colon*, to

The *iliac passion*,
whence.

* *The iliac passion is owing to, &c.* Though this disease has generally been thought to be distinct from any other, yet there are some who consider it only as a different degree of the colic, owing to the same proximate cause, and having the same symptoms; and this cause a spasmodic contraction of part of the intestines, produced by irritation; for though obstructions have been assigned as a source also, they are only such, in as much as they produce this contraction; and therefore the cure depends upon its removal. To attain which point, such remedies are indicated as take off by their various antispasmodic powers the intestinal spasm, or by their purgative action promote that of the intestines, or produce mechanical dilatation. See Culen's *Practice of Physic*, vol. iv. p. 20, 22, 23, 24. W.

Sect. 1. prevent the return of the excrement into the *ilium*, or any other membrane belonging to the cavity, singly sustains the force of this preternatural motion. This inverted motion, productive of the pain, may proceed either from (1.) obstruction, or (2.) irritation.

Whence the inverted motion of the intestines.

54. (1.) It is manifest that whatever blocks up the passage of the intestines, must needs occasion this contrary motion in them; and this may happen, according to authors, (1.) from hardened excrements, (2.) much *flatus* collected in the bowels, and, as it were, purging them up, (3.) strangulation from a rupture, (4.) inflammation, (5.) and lastly, large swellings filling up their cavity. However, it is plain that the inverted motion, proceeding from these causes, is rather to be accounted the motion of the aliment taken in, than of the intestines themselves; nor is it an inversion of the motion of the whole duct, but of those parts only which are situated above the seat of the obstruction; for which reason I call it the *spurious iliac passion*.

55. (2.) I conceive the inversion of the peristaltic motion generally proceeds from acrid and peccant humours being deposited in the stomach and adjacent intestines, from the violent fermentation of the blood in the beginning of the fever, whereby the motion of the stomach is first inverted, and its contents thrown up with violence, and then the small guts that are contiguous to it being weakened, yield to the violent motion of the stomach, and at last the large guts are also made to sympathize with them. This is the *true iliac passion*, and the disorder under consideration. The method of curing it has hitherto remained a secret, notwithstanding the pretensions

fions of such as had recourse to quicksilver and leaden bullets, which do little service, and are frequently very dangerous. Chap. 4.

56. As soon as it appears from glysters being vomited up, and other signs, that the disease is a true iliac passion, I endeavour to answer these three intentions: The intentions of cure to be answered.

(1.) To put a stop to the inverted motion of the stomach, which produces the same in the intestines.

(2.) To strengthen the intestines weakened by the sharp humours. And

(3.) To free the stomach and bowels from these sharp humours.

57. (1.) I direct a scruple of salt of wormwood,* with a spoonful of lemon juice, to be taken In what manner,

* I direct a scruple of salt of wormwood, &c. Bleeding is certainly the first step to be taken, except the patients are greatly debilitated, or of weak, relaxed habits; in order to prevent an inflammation coming on, and be a means of taking off the intestinal spasm, consequently stopping the inverted motion of the stomach: and this must be often repeated, if the fullness and hardness of the pulse, intenseness of pain, the firm texture and sifiness of the blood, indicate the presence of inflammation.

The saline mixture should be oftener given, and in a state of fermentation, as it is more effectual in stopping the vomiting in this form. Heat should be applied in a dry or humid form, a semicupium is the best, or where that cannot be had, fomenting the abdomen, and bathing the legs in water at the same time; blistering the abdomen is highly useful, or the upper parts of the thighs. With regard to the pilulæ cochix, less drastic purges should be first tried, for these may be too powerfully irritating, and tend to bring on or increase inflammation; and sometimes lenient purgatives will answer better than those which are more stimulant; such as natron vitriolatum manna with oleum Ricini, &c.: but if the stomach will not bear these, jalap may be tried, mixed with some of the neutral salts, calomel,

Sect. 1. ken morning and night, and in the intervals give some spoonfuls of *mint-water* by itself, twice every hour, by the repeated use of which the vomiting and pain may be soon removed. (2.) At the same time I order a live puppy to be applied to the belly, till the following purgative is given. (3.) Two or three days after the pain

mel, extractum e colocynthide compositum, as they can be given in a solid form and small quantities, to produce the desired effect.

Opiates have been recommended by some; but if we consider the nature of their operation, great caution is necessary before we administer them; for "though they may for a while alleviate the pain, they retard and suspend the peristaltic motion of the bowels so much, as to allow the intestines to fall into constrictions, render the cause of the complaint more obstinate, and prevent the operation of purgatives," a thing so devoutly to be wished in these cases, and without which little good can be expected. See more on this head, Cullen's *Practice of Physick*, vol. iv. pag. 28.—Glysters should be given every hour, or every two hours, at first the milder ones, as warm water in pretty large quantity, or that in which salt has been dissolved; purgative glysters, those mixed with turpentine, or tobacco smoke thrown into the intestines according to the urgency or obstinacy of the attendant circumstances; ten or twelve grains of calomel formed into a pill may be given, and a few hours after a purgative glyster injected, which will assist the operation, or it may be administered in smaller doses, and oftener repeated: care always being taken before these irritating purgatives have been given, to have sufficiently guarded against inflammation by sanguinary depletion.

When we are certain there is no inflammation attendant, opiates may be exhibited, but they should be joined with purgatives, or purgatives should immediately succeed them. Linseed tea, or that made with the roots of marshmallows, barley water, or some such mild sheathing diluents should be used as common drink, and great care taken for some days after the recovery to persist in such a course as may prevent a relapse.—On this subject see *London Medical Observations and Inquiries* vol. iv. pag. 223, &c.—Macbride's *Introduction*;—*Celsus*,—*Hoffman*. 117.

and

and vomiting are gone off, I give a dram of the Chap. 4.
greater *pil. cochia*, dissolved in *mint-water*, and
direct draughts of *mint-water* to be frequently
taken during the operation of the purge, in
order to prevent the return of the vomiting.

58. I have observed, that it is in vain to give
this, or any other the strongest kind of purge,
before the stomach be strengthened and re-
duced, together with the intestines, to its natural
motion; for otherwise all cathartics will prove
emetic, and consequently be more prejudicial
than serviceable; and this reason induced me to
forbear purgatives, till I had first used stoma-
chics a while.

59. The diet I direct is very sparing; for I
allow the patient only to sup some spoonfuls of
chicken broth, twice or thrice a day, and con-
fine him to his bed during his illness, and till
the signs of recovery appear, directing him to
continue the use of the *mint-water* for a consi-
derable time after the cure, and to keep the
belly warm, by wearing a double flannel,
whereby a relapse may be prevented, which
happens more frequently in this than any other
disease.

60. In these few particulars consists my whole
method of curing this disease, which, it is ho-
ped, no one will deliberately condemn on ac-
count of its simplicity and the want of ele-
gance of language, and the pomp of medicine
to recommend it.

61. Thus I have enumerated the symptoms
that usually happen in this fever; but there are
others I shall not now mention, as they are of
less moment, and require no particular treat-
ment, but go off spontaneously, if the fever

Se&t. 1. be skilfully treated. And let this suffice for the continued fever of this constitution, with its symptoms.

C H A P. V.

Of the intermitting Fevers of the Years 1661, 1662, 1663, 1664.

1. **T**HE constitution, as we observed above, that prevailed through all the preceding years, having so eminently favoured the rise of all kinds of intermittents, I will here set down the observations I then made concerning them, and also add those which relate to the few intermittents that have happened sporadically since that time, that I may not break in upon the history of the following years.

The three stages of intermittents to be considered.

2. And first it must be observed, that, *in order to conjecture something, at least, of their nature,** regard must be had to three different stages of the fits of intermittents; *viz.* (1.) the *shaking*; (2.) the *ebullition*; (3.) the *despumation*.

Description of the first.

(1.) I judge the *shaking* proceeds from this cause, that the febrile matter, which being not yet turgid, was in some measure assimilated by the blood, becomes at length not only useless, but prejudicial to nature, raises a kind of violent motion in the mass, and endeavouring, as it were, to escape, causes a chillness and shaking; which shew how pernicious in its nature

* *In order to conjecture something of their nature, &c.* We have before spoken of the general received opinion relative to the cause of fever, in which that of intermittents, as well as others, are included, pag. 24, note *; a repetition is here therefore unnecessary. *W.*

the febrile matter is to the body, in the same manner as purging draughts in weak stomachs, or poison casually swallowed, immediately occasion a shivering, and other symptoms of the same kind. Chap. 5.

3. (2.) Nature, therefore, being by this means irritated, raises a *fermentation* in order to expel the enemy with less difficulty; this being the common instrument she uses to free the blood of its morbid particles, as well in fevers, as in some other acute diseases; for by means of the fermentation the separated parts of the peccant matter, that were equably mixed with the blood, begin to be united together in some measure, and consequently may be more easily moulded, so as to be fitted for despumation. That this is probably the case, appears from the death of such as die in the fit, which generally happens in the first stage of it, *viz.* during the *shaking*, or *cold fit*; for if they survive till the effervescence, or hot fit comes, they escape at least for that time. Both these stages are severe, (3.) but in the third, namely the *despu-* The second.
mation, all the symptoms first grow milder, and after go off entirely. *By despumation I mean no more than the expulsion or separation of the febrile matter, now in a manner overcome, when what is thrown off partly resembles yeast, and partly lees, as may be seen in other liquors.* The third.

4. Having premised these particulars, I proceed next to shew why the fit returns, though the patient now seems to be out of danger; and this arises from the febrile matter not being wholly thrown off, whence the latent remainder re-appears, according to the nature of the fits, and occasions fresh disturbance, running through Whence the return of fit.

Sect. 1. } through the several stages above described. How
 it happens that this latent remainder (not sufficiently overcome by the preceding effervescence, and consequently not expelled with the other peccant matter) does not proceed with the same regularity in every intermittent, but sometimes require one day, sometimes two, and at others three days, before it comes to maturity, and causes a new fit, is what I cannot account for; neither do I know that any one has hitherto sufficiently explained this secret operation of nature.

5. I do not desire to be called a philosopher, and as for such as conceive they have a right to this title, and, upon this account, may possibly censure me *for not having attempted to dive into these mysteries,** I advise them to try their faculties

* *For not having attempted to dive into these mysteries, &c.*
 A search into efficient or material causes is doubtless one of the most idle and impertinent uses we can make of the powers of our understanding; for as they lie far beyond the reach of the senses, we cannot but fail in the attempt; and it is not improbable, on a supposition we could come at them, that they might rather serve to gratify a vain curiosity, than advance us in useful knowledge. Would it not then be acting more prudently to resolve them into the will and pleasure of the Creator, without presuming to penetrate into what he should seem to have covered with an impenetrable veil; and rather apply ourselves to mark their effects and operations, so as to draw from thence a set of directions, which, being built on so solid a foundation, might, if judiciously applied, and varied as particular circumstances may require, serve to conduct us with safety and security in most occasions? Had the generality of physicians, for instance, who for many ages past have racked their brains to no purpose, in order to discover the remote and latent causes of simple and obvious effects, made this the sole scope and end of their researches, what a fund of beneficial knowledge would have been amassed by this time!
 It

faculties in accounting for the various works of nature that every where surround us, before they go about to teach others. I would fain know, for instance, why a horse comes to his full growth in seven years, a man in twenty-one; why some plants usually flower in *May*, and others in *June*; not to mention innumerable other effects, whose causes are as hard to be discovered. Now if the learned ingenuously confess their ignorance in these points, I see no reason why I should be censured for being silent, in a matter not less obscure, and perhaps wholly inscrutable; especially as I am persuaded that nature proceeds in this case, as in all others, with a certain regularity and uniformity; the matter of tertians and quartans being not less subject to, and governed by the laws of nature, than all other kinds of bodies are.

6. *All intermittents, in general, begin with a chillness** and shaking, which are soon followed by heat, and then by sweat. The patient usually vomits both in the cold and hot fit, complains of

Their symptoms and particular kinds described.

It may seem strange, that in so great a length of time they should not have perceived that they have no adequate faculties for those sublime inquiries, but that all the truly useful, or scientific knowledge they can ever hope to gain, is only to be had from observation and experience, every thing else being eternally liable to be controverted, as existing only in the imagination.

* *All intermittents, in general, begin with a chillness, &c.* With regard to the arrangement of this we shall speak hereafter. But it is necessary here to give a more circumstantial and accurate account of the natural progress of an intermittent paroxysm, as we think with Dr. Swan, that it is too loosely and imperfectly described in this place.—

The fit consists of three stages, the first, COLD; the second, HOT; and the third, SWEATING.—

Upon

Sect. 1. of great sickness, is thirsty, his tongue dry, &c.
 } And these symptoms abate in the same degrees
 as the sweat increases, which, becoming more
 copious, ends the fit. And now the patient
 continues

Upon the onset of the first, there is produced a general languor, the pulse becomes sometimes slower, and always weaker than before; but as the cold comes on it is smaller, very frequent, and often irregular. As the heat succeeds, the pulse becomes more regular, hard, and full, and in these respects increases till the sweat breaks out; and as it flows, the pulse becomes softer, and less frequent, till the sweat ceasing altogether, it returns to its usual state.

The respiration during the cold stage is small, frequent, and anxious, and sometimes attended with a cough; the hot stage approaching, the respiration becomes fuller and more free; but continues still frequent and anxious, till the flowing of the sweat relieves the anxiety, and renders the breathing less frequent and more free; the sweat ceasing, the breathing returns to its ordinary state.—The appetite for food ceases in the state of languor; and thus continues during the whole of the paroxysm; with an aversion from all solid, and particularly animal food: as the cold stage advances, a sickness and nausea come on, often increasing to a vomiting of a matter for the most part bilious; which vomiting brings on commonly the hot stage; in which, as it advances, the nausea and vomiting abate, and cease altogether when the sweat breaks out.

The patient is thirsty:—during the cold stage, the urine is almost colourless, and without cloud or sediment; in the hot it becomes high coloured, though still clear; afterwards, during the free flow of sweat, deposits a sediment, commonly lateritious, and continues to do so some time after the paroxysm is finished. With respect to sensation and thought—during the cold stage the sensibility is often greatly impaired; but when the hot stage is formed, the sensibility is recovered, and often considerably increased.—In the cold stage also, attention and recollection become difficult, and continue more or less so during the whole paroxysm; and hence sometimes comes on a delirium, but that more frequently after the commencement of the hot stage.—Drowsiness and stupor sometimes attend the cold stage, and often increase to a degree which may be called

comatose,

continues tolerably well *till the fit returns at the usual time*;^{*} which in a quotidian, happens once in the space of twenty-four hours, or a natural day; in a tertian, every other day; and in a quartan, every third day; calculating from the beginning of one fit to the beginning of the next. But the two latter are frequently doubled, so that a tertian comes every day, and a quartan two days successively, the third being the intermediate, or well day; and sometimes, when it proves a triple quartan, it comes three days successively, the intermittent deriving its name from the manner of its first appearance. Chap. 5.

7. This redoubling of the fits is sometimes caused by the too great quantity and activity of the febrile matter; in which case the adventitious fit precedes the *original* one: but sometimes, when the patient is considerably weakened, and the violence of the fit abated, either by Whence the redoubling of the fits.

comatose, or apoplectic.—In this stage, sometimes early, comes on a head ach, which, though, is more commonly felt after the hot stage is formed, and then usually attended with a throbbing in the temples; this head ach gradually goes off, as the sweat flows more freely. With this complaint there are pains of the back, and some of the large joints commonly attendant, which preserve the same course as the head ach.”—See Cullen’s *Practice of Physic*, vol. i. pag. 69, &c. *W.*

^{*} *Till the fit returns at the usual time, &c.* There are some distinctions made by authors in respect to the terms relative to this point—From the beginning of one fit to the commencement of the succeeding one, is called *INTERVAL*; from the termination of one to the beginning of another, *INTERMISSION*—So that the febrile paroxysm is included in the former, in the latter omitted; hence we say the intervals of a *QUOTIDIAN* occupies twenty-four; of a *TERTIAN*, forty-eight; of a *QUARTAN*, seventy-two hours: The intermission not so regular, depending upon the duration of the paroxysm. *W.*

Sect. 1. too free an use of cooling medicines, or profuse evacuations, the adventitious fit follows the *original* one, and is both milder and shorter than it. In the former instance, the violent motion of the matter does not wait for the due time of its return, and finishes its despumation in a shorter time; but in the latter, the blood being too weak to throw off the febrile matter at once, immediately causes a fresh fit, in order to expel the remainder. And perhaps upon these two contrary causes, both the anticipation, and the slower approach of the fits, in common regular intermittents, may depend: both which frequently happen in quotidians.

All inter-
mittents ei-
ther vernal
or autumn-
nal.

8. Intermittents are either *vernal*, or *autumnal*; though some arise in the intermediate seasons; but as these are not so frequent, and may be referred to Spring or Autumn, according as they approach nearest to either, I shall comprehend them all under the two kinds above mentioned. These diseases make their first appearance in *February* and *August* particularly; though sometimes they appear sooner or later, according as the air is more or less disposed to produce them, which, of course, renders them more or less epidemic. The *autumnal* intermittents of 1661 were an instance of this; for I remember a woman was that year seized with a quartan upon St. *John's* day, and numbers very early in the season; and afterwards in the declension of the year, these distempers became very epidemic.

The two
kinds dif-
fer essen-
tially.

9. This distinction of intermittents is so necessary, that unless it be well attended to in practice, no just prognostic can be formed of their continuance, nor a method of cure directed, suitable to the different nature, both of the seasons,

sons, and disorders. It must be owned, that the intermittents of both seasons do not greatly differ, either as, (1.) to the manner of their attack; which begins with a shaking, is soon succeeded by heat, and at length goes off with sweat; or (2.) the difference of their appearance, in which respect some are tertians both in spring and autumn: and yet I judge that they differ essentially from each other. Chap. 5.

10. I will begin with *vernal* intermittents, most of which are either *quotidians*, or *tertians*, and appear sooner or later, according to the various disposition of the season. For the spirits being concentrated by the winter's cold, gather strength in their recess, and in this lively state are invited out by the heat of the approaching sun, and, being mixed with the viscid juices, wherewith nature had stocked the blood during that season, (which, however, are not so viscid as those whose fluid parts have been dried up and parched by the preceding heat in *autumn*;) are, whilst they endeavour to escape, detained, and as it were entangled, and consequently occasion this *vernal ebullition*, in the same manner as is observed to happen upon exposing bottles filled with beer to the fire, after having been long kept buried in sand, or in a cool cellar, whence the liquor begins to work, and endangers the bursting of the bottles. The blood, thus disposed, attempts its depuration, and, by means of its volatile spirits, finishes it in a short time; unless the juices be too viscid, so as to check the fermentation: and though this should happen, yet the vernal effervescence seldom proves continued and regular, but generally intermits, and is divided as it were into several

Sect. 1. vernal fits. For the blood being now turgid with these rich spirits, nature hurries on her work, and by particular fits perfectly completes the secretion of some parts, before she finishes the universal separation. And this seems to be the reason that there are but few continued fevers in spring, and particularly in its decline, unless an *epidemic* constitution happens to prevail; the fermentations which arise at this time, being either suddenly checked, or hastening to an intermission; or lastly, such parts of the juices as were best fitted for separation, are speedily and violently thrown upon some other part of the body; whence quinseys, peripneumonies, pleurisies, or the like dangerous diseases, immediately arise, especially at the decline of the spring.

Few continued fevers in spring.

Vernal intermittents seldom lasting, and always salutary.

11. I have already observed that vernal intermittents seldom last long, and always prove salutary; so that the aged or infirm can scarce be endangered thereby, without very unskilful treatment. But I have sometimes known vernal tertians prolonged to autumn, by improper bleeding and purging, along with an unsuitable regimen; but this season being very contrary to their nature, immediately checked them, the patient in the mean time being almost worn out by the frequent redoubling, and long continuance of the fits, so that he seemed in great danger, though, as far as I have hitherto been able to observe, he always recovered.

12. Neither have I met with those dangerous symptoms, in such as are cured of this disease; which, as shall hereafter be shewn, succeed inveterate autumnal intermittents; *viz.* a mortal inflammation of the tonsils, a hard belly, dropical

fical swellings, &c. But I have often found, Chap. 5.
 when the patients have been extremely debili-
 rated by the long continuance of the disease, the Sometimes
 doubling of the fits, and repeated evacuations, succeeded
 that they have been seized with a madness, by a mad-
ncfs.
 when they began to recover, which went off
 proportionably as they gathered strength.

13. But autumnal intermittents differ very An autum-
nal epidemic
 much from vernal ones. For though a tertian tertian some-
times dan-
gerous.
 in those years, when it is not epidemic, and seizes
 healthy persons, does sometimes go off in a
 short time, and is accompanied only with the
 usual symptoms of vernal tertians; yet when it
 is epidemic, and seizes the aged, or persons of
 an ill habit of body, it is not without danger,
 and lasts two or three months, and perhaps
 even to the following spring. But quartans are
 more dangerous and obstinate than tertians, for
 old persons are sometimes destroyed by a few
 fits; in which case they generally die in the cold
 fit, as we have already observed. Those who
 have just entered upon old age are not indeed
 in so much danger of sinking under the disease
 in so short a time, but are scarce ever cured be-
 fore the return of the same period of time of the
 following year wherein they were first seized:
 and sometimes this disease leaves some disorder
 behind it, that in the end proves mortal.

14. A quartan now and then changes its face, A quartan
sometimes
succeeded by
dangerous
symptoms.
 and likewise produces abundance of morbid
 symptoms, as the scurvy, a hard belly, a drop-
 sy, &c. But young persons are better able to
 bear this distemper, from which they are some-
 times freed about the winter solstice; though it
 happens more frequently, particularly when
 bleeding and purging have been used, that
 their

Sec̄t. 1. their recovery is prolonged to the subsequent vernal equinox, or even the succeeding autumn. I have often wondered to see infants struggle with this disease for six months, and at length recover.

Soon go off when it comes a second time.

15. It is worth observing here, that *if any person be seized with a quartan*,* who has had it before, though long since, it terminates spontaneously after a few fits, of whatever age or constitution he be.

Vernal intermittents, how to be treated.

16. I have always been of opinion that vernal intermittents might be wholly left to themselves, having never known a single person destroyed thereby; and on the contrary have observed *that the attempting their cure*, † especially by evacuating medicines, tended only to render them more obstinate. But if the patient will not be satisfied, unless something be done to relieve him, various methods may be success-

* *If any person be seized with a quartan, &c.* It is known from observation, in the marshes of Essex, the fens of Cambridgeshire, and other places where intermittents are endemial, that those who have laboured once for a series of time under this complaint, which will sometimes continue two or three years with short intervals, and escape the fatal consequences, will afterwards live totally free, or subject only to very slight attacks, which spontaneously disappear; though this is not always the case. *W.*

† *Attempting their cure, &c.* In general, vernal intermittents are not dangerous, and may be suffered to go off spontaneously; but sometimes physicians find it necessary to attempt their cure; otherwise they are apt to prove inveterate in some constitutions, and occasion other obstinate disorders. And it is observable, that they are commonly cured by evacuating medicines, such as vomits, gentle laxatives, sudorifics, blisters, and sometimes bleeding. So that it may seem strange our author should except against a method, which yet in the next paragraph he lays down for safe and successful. *W.*

fully

fully employed for this purpose, as I have frequently experienced. Chap. 5.

17. A vomit seasonably given, so as to have done working before the fits begin, sometimes proves a cure; especially if a moderate dose of syrup of white poppies, or any other opiate, be given after the operation is over. Sometimes diaphoretics cure, especially in *vernal quotidian*s, by promoting the sweat that breaks out towards the end of the fit, provided the patient be well covered, and the sweat continued as long as he can bear it; for the juices not being very thick in this season, the disease is perfectly cured, which would otherwise return: but this never happens in autumn. I have also sometimes cured *tertians* by giving glysters upon three or four of the intermediate days. Sometimes cured by a vomit,
Sometimes by glysters.

18. *But if bleeding be used too freely,** which inconsiderate persons easily yield to on account of the season; or the spirits, which should directly attempt the business of despumation, be so far impoverished by the preceding weakness of the patient, as to be unable to perform it, *vernal tertians* may then withstand all our endeavours, and perhaps prove as lasting as *autumnal ones*; though they do not usually continue so long, but either Copious bleeding retards the cure.

* *But if bleeding be used too freely, &c.* Unless at their first approach they put on the appearance of continued fevers, attended with symptoms of plethora, and strong tone of the vascular system, there can scarce be a necessity for bleeding at all, for that would reduce the powers of the constitution to too low an ebb, and be highly prejudicial, by increasing vascular debility, preventing the efflux of the humours to the superficies of the body, and constituting a disease of long continuance: but where the symptoms approached near to a fever of the continued type, as such should it be treated.—See Note, chap. i. pag. 3. *W.*

Sect. 1. go off spontaneously, or soon give way to the use of a few gentle remedies.

Autumnal
intermit-
tents de-
scribed.

19. But *autumnal intermittents*, of which I am now to treat, are not so easily conquered. When the constitution is epidemic, they usually appear about *June*, but otherwise not till *August*, or the beginning of *September*, and very rarely in the following months. When numbers are seized at the same time, we may generally observe that the fits come exactly in the same manner, and at the same hour of the day, a little sooner, or later perhaps, unless this disorder be disturbed in some persons by remedies that either hasten or retard the coming of the fit.

Hard to
be distin-
guished.

20. It must likewise be noted, that it is a difficult matter at the first appearance of intermittents, especially of those that are epidemic in *autumn*, to distinguish them exactly; because, at this time, they are accompanied with a continued fever; and for some time afterwards, unless great attention be given, nothing more than a remission can be discovered; but by degrees they perfectly intermit, and put on a form entirely agreeable to the season of the year.

21. They are, however, either *tertians* or *quartans*; (but the latter are deservedly accounted the genuine product of *autumn*) and in reality, so much alike, that they frequently vary, at least for a time, from one to the other; shortly after, perhaps, re-assuming their pristine form. But *vernal tertians* never assume the shape of *quartans*, because they differ widely from each other; nor have I ever seen a *quotidian* happen in this season, unless a *double tertian*, or
a triple

a triple quartan * should seem to deserve that name. Chap. 5.

22. I judge that these intermittents are occasioned † nearly in the following manner; viz. as the year advances the blood is likewise proportionably enriched, (just as vegetables shew the course of the year by their growth and decay) till it comes to its height, and ultimate vigour; after which, keeping pace with the time of the year, upon the declension thereof, it also declines; and more particularly when some accidental cause contributes thereto, as great loss of blood, taking cold, the use of indigestible and excrementitious food, unseasonable bathing, and the like. For the blood, being in this depressed state, is subject to every morbid impression that any constitution of the air may communicate to it, which, at this time, tends to produce intermittents, epidemically. And to this the immediately succeeding ebullition tends, which

The cause of autumnal intermittents.

* Double tertian or a triple quartan, &c. By the first is meant, a TERTIAN returning every day, paroxysms being unequal, though every other day similar.

By the second, a QUARTAN coming on every day, the paroxysms being similar every fourth day.

But whoever is desirous of being more minutely informed of the different varieties occurring in intermittents will find the explanations accurately given in SAUVAGES'S *Nosologia Methodica*, or CULLEN'S *Synopsis Nosologiæ Methodicæ. W.*

† I judge that these intermittents, &c. This account of the cause of autumnal intermittents is not a little obscure and unsatisfactory; and it may seem strange that this great man, who was so professed an enemy to hypothetical speculations, should, notwithstanding, so frequently attempt to reason upon matters, which lie so far out of the reach of the acutest understanding, that a little attention to the subject will convince us of the impossibility of arriving at any certain and demonstrative knowledge thereof.

Sect. i. happening sometimes in an extremely vitiated blood, occasions a bad fever, accompanied with several malignant and dangerous symptoms. But from whatever cause it arises, the blood, having lost a considerable share of its spirits, and being greatly parched by the heat of the preceding summer, will perform its ebullition slowly, and require much time to finish its depuration.

Whence so
hard to cure.

23. Now, to shew clearly how difficult it is to cure autumnal intermittents, the dissimilitude between the continued and intermittent fevers of this season must be well considered; which chiefly consists in this, that continued fevers carry on the effervescence once begun, regularly and uninterruptedly to the end of the disease; whilst intermittents perform the business by parts, and at different times; but in both the effervescence is finished in about three hundred and thirty six hours, the precise time that is ordinarily required for the depuration of the mass of blood in a human body, when the business is wholly left to nature; in the same manner as wine, beer, and cyder have each a peculiar time wherein their depuration is finished.

The time
spent in the
effervescence.

The same in
continued
fevers and
quartans;

24. But though the blood sometimes in *intermittents*, as it happens in a *quartan*, attempts, and at length finishes its depuration in six months; yet by an exact computation it will appear that there is no more time employed here, than is, for the most part, naturally spent in completing the depuration in continued fevers. For fourteen times twenty-four hours, or fourteen natural days, make three hundred and thirty-six hours; so that allowing five hours and a half for the duration of every fit of a quartan, the whole will be equal to fourteen days, that is, three hundred and thirty-six hours. If now it should be said that a
quartan

quartan sometimes lasts above six months, which Chap. 5.
also holds in other intermittents; I answer, that
the continued fevers of this constitution are like-
wise often prolonged beyond fourteen days: but,
in both cases, if care be taken to keep up the ef-
ferescence in a proper manner throughout the
course, and especially towards the declension of
the disease, the despumation will be finished in
the time above mentioned; whereas, if the
fermentation be unseasonably checked by cool-
ing medicines, or glysters, in this stage, no
wonder the disease proves lasting: the procedure
of nature being by this means disturbed, and
the texture of the blood in a manner loosened or
broken, so that it cannot effectually attempt the
despumation; which also sometimes happens
spontaneously in weakly constitutions, unless
drooping nature be assisted with cordials to ena-
ble her to finish the business of despumation.

25. It must likewise be further observed here, but differen
in some fe-
vers.
that what has been said of the continuance of
the fermentation is to be understood only of such
fevers as have arrived to a fixed state; for there
are fevers, both of the continued and intermit-
tent kind, which are of a variable nature, and
do not reach the limited period in their efferves-
cence. Such are those that sometimes arise from
a slight error in the non-naturals, as in aliment,
drink, air, and the like: but they often termi-
nate in a short time; as they also do in young
persons whose blood is pure, and full of spirits.
For as their fevers proceed from a certain spiritu-
ous, subtle, and volatile matter, they finish their
fermentation speedily, and go off.

26. Now in order to raise a fermentation, it is The requi-
sities for fer-
mentation.
necessary that the fermentable matter, whether
blood, wine, or any other liquor, be of so vis-

Sect. 1. } cous and tenacious a nature, as to detain, and, as it were, envelope the spirits therein contained; yet so as they may be able to be moved briskly in the liquor, but not to fly off. Let it be remembered, however, that the liquors above-mentioned must not be so viscous, as to oppress the spirits entirely, and so prevent their being moved at all.

Intermittents, how to be treated.

27. These particulars being laid down, which I conceive are rational and well grounded, it will not appear strange that I propose no other method of cure in intermittents than seems necessary to be used in continued fevers, to finish the business of their despumation in a proper manner; since they differ, as to the manner wherein nature usually expels the morbid matter: *viz. by means of an effervescence limited to a fixed time*: though with respect to their kinds and the peculiarity of their nature, I own they differ greatly from continued fevers, and from each other likewise. The curative indications therefore must be taken either (1.) from a careful observation of the steps which nature takes to overcome the disease, that so we may quicken the fermentation already raised, and by this means recover the patient; or (2.) we must endeavour to investigate the specific cause, in order to remove the disease by effectual and specific remedies.

28. I have tried both methods with great care and application; but have not hitherto been able to cure *autumnal intermittents* before they had finished their stated fermentation above specified, however disagreeable it has been to the patients to wait so long for their recovery. If therefore any one is possessed either of a certain method, or a specific remedy that will not only stop the progress

progreſs of, but thoroughly cure theſe diſorders, I think he ought to diſcover it for the good of mankind; and if he does not, I will venture to ſay, that he neither deſerves the character of a good, nor of a wiſe man: for it is not acting the part of a good man, to convert to his private advantage what might prove ſo eminently ſerviceable to the public; nor of a wiſe man, to deprive himſelf of the bleſſing he might juſtly expect from heaven, by endeavouring to promote the public good. For honour and riches are held in much leſs eſteem by good men than virtue and wiſdom.

Chap. 5.

29. But though it be difficult to cure *autumnal intermittents*, yet I will ſet down what I have found do moſt ſervice in them. Frequent experience has taught me that it is very dangerous to attempt the cure by purging, (unleſs in the way hereafter to be mentioned) and eſpecially by bleeding: for in *tertians*, particularly in a very epidemic conſtitution, if bleeding does not prove a preſent cure, it prolongs the diſeaſe even in young, ſtrong, and otherwiſe healthy ſubjects; but aged perſons, after having long ſtruggled with it, are deſtroyed thereby, their death being generally immediately preceded by a mortal inflammation of the tonſils, as above mentioned. Again, bleeding cauſes thoſe ſymptoms to come ſooner, which, as we ſaid above, accompany autumnal intermittents at their decline, or directly ſucceed them; but it is ſo pernicious in *quartans*, as to occaſion the diſeaſe to laſt a year in young perſons, which otherwiſe would have gone off in ſix months. And in the aged, who, if bleeding had not been uſed, might have recovered in a year, there is danger of the diſeaſe being

Bleeding and purging unſafe in autumnal intermittents.

Sect. 1. being prolonged thereby beyond its stated time, and of its proving mortal in the end. What has been observed of bleeding holds also of purging, with this difference only, that the latter is less dangerous, unless it be frequently repeated.

The cure of
autumnal
tertians.

30. *I begin the cure of autumnal tertians* * in this manner: the patient being put to bed, and well covered, I endeavour to raise a sweat by giving fage posset drink about four hours before the coming of the fit; and as soon as the sweat begins I give two scruples of the greater *Pil. cochie* dissolved in an ounce of the following mixture:

Take of aqua vitæ, a pint; Venice treacle three ounces; saffron one dram: let them stand together in infusion for use.

These remedies being taken as directed, the sweat is to be encouraged for some hours after the usual time of the coming of the fit, with care to prevent checking it, which might otherwise be occasioned by the operation of the purgative.

* *I begin the cure, &c.* There seems to be no necessity for any animadversions on our author's mode of cure in this disease, it may be almost rejected in *toto*, except where he speaks of the bark, which experience has proved to be the most certain remedy for intermittents yet discovered; and will always, I am persuaded, cure, if it is given judiciously, and coupled with such other medicines as the peculiar circumstances of the constitution may require. Nor matters it of what species the intermittent may be; "for the distinctions," according to the opinion of a modern professor, "so often mentioned in the schools and by writers, appear not to be of much practical use, as the different kinds so often alternate; which shews that the cause of these different appearances of intermittents is not owing to different miasmata, but perhaps to some more changeable circumstances of the patient." See *Dr. HOME's clinical Experiments, &c.* pag. 12. *W.*

31. I have found this more successful in the cure of this disease, than the giving the common decoction, suited to the same intention, made with *gentian root, the tops of the lesser centaury, &c.* and a little *sena* and *agarick*. For as it causes two contrary motions at once, *viz.* sweating and purging, it produces the same effect as the decoction, by disturbing and interrupting the usual course of the fit; and is more effectual, and as safe. Thus I have cured abundance of autumnal intermittents, and could not find out a better method during these years.

Chap. 5.

Successfulness of the method.

32. When a *tertian* has varied its form, and is become a *double tertian*, on account of the patient's having been weakened, either by evacuations, or any other way, a sweat must likewise be raised, as above directed; (30) and at the same distance of time from the coming of the next fit, either by giving the remedy there recommended, or some other powerful sudorific, which may also be repeated in the succeeding genuine fit: but the *Pil. cochiae* must be omitted, because it is unsafe, as well as useless, to weaken the patient more by purging, and by this means promote the doubling of the fits, when he has been already debilitated thereby. In extreme weakness from this cause I prescribe the following electuary:

Manner of treating a double tertian.

Take of the conserve of flowers of borage and bugloss, each an ounce; conserve of rosemary, half an ounce; candied citron-peel, and nutmeg, and Venice treacle, of each three drams; confection of alkermes, two drams; mix them up into an electuary; of which let him take the quantity of an hazel nut, morning and night; drinking after it six spoonfuls of the following julap:

The electuary.

Take.

Se^{ct.} 1. *Take of the distilled water of meadow sweet, and treacle water, of each three ounces; syrup of cloves, an ounce; mix them together.*

The julap.

Instead of the julap I sometimes give some simple plague water, sweetened with sugar; at the same time forbidding the use of glysters, and allowing chicken broth, water gruel, &c. by way of diet.

Quartans,
how to be
created

33. With respect to *quartans*, whoever is but slenderly skilled in physic, cannot, I conceive, be ignorant how unsuccessful all the usual methods of cure, hitherto directed, have proved, *unless by means of the bark,** which yet more frequently

* *Unless by means of the bark, &c.* As bark is a medicine whose principal action is to give tone to the system, and increase the power of vascular action, it may be necessary to observe, that in intermittents, which appear to have a tendency to put on the continued type, an over hasty administration of it may be unsafe, therefore we should not fly to it in the very early stages; but rather defer its use, till we have paved the way by emetics, aperients, and diaphoretics: hence it is always judicious to wait till the patient has had two or three regular paroxysms, then all danger will be avoided. It may be given in various forms, in cold or hot infusions, extract, tincture, or in powder; the last is esteemed the most efficacious, where the stomach can bear it; and the more we can throw in between the fits the better. The times of giving it has been different; but it is concluded by experience, that the most eligible is to begin its use in the sweating stage of the paroxysm, and continue it till the approach of the succeeding fit. This is proved by a set of experiments made by Dr. HOME, and delivered to the public in his clinical histories, to which we refer our readers. But in the cure of intermittents, various modes have been prescribed in order to render the bark most certainly effectual; all which tend to prevent the accession of the cold fit, and, of course, the consequences. Some have advised a vomit to be given immediately before the paroxysm; others opiates; whilst others have given large doses

quently checks, than cures the disease. For Chap. 5.
after it has lain dormant for two or three weeks, and the patient has had a short respite from its violence, it returns afresh as severely as before, and cannot generally be conquered in a short time, notwithstanding the bark be frequently

doses of powerful stimulants alone, or joined with opiates. I have ever found, during a course of twenty-five years practice, the best mode is giving an emetic before, and beginning the use of the bark, or soon as possible after the fit; at the same time continuing it liberally till the succeeding paroxysm. But it must be observed, that joining it with other different medicines has appeared to add much to its efficacy. I have, therefore, ever considered the state of my patient's constitution, and as I have found it subject to particular affections, coupled such medicines with the bark, as were calculated to relieve, in other cases, such constitutional defects, viz. If the patient was young and vigorous, having premised bleeding and an emetic, with some gentle aperients, I generally join some of the neutral salts, particularly sal ammoniacus; if the motion of the vascular system was torpid, volatiles and cordial stimulants; if the patient was subject to hysteric affections, fetids and antispasmodics; if hypochondriac, myrrh, chalybeates, &c. and I have more than once been successful by these means, where the bark alone had been given, though copiously, yet unsuccessfully. In children afflicted with intermittents it has been sometimes difficult to persuade them to take the bark, owing to the disagreeableness of the taste; but this difficulty I have known conquered by mixing the powder with cream, and sweetening the composition with sugar, and to this has the disease yielded. Should the bark prove purgative, a few drops of tinctura opii given in each dose, or a small portion of confectio opiata, has remedied that inconvenience. When the bark cannot be taken internally, it may be externally applied, in plaisters of the extract, to the wrists; the powder quilted in callico and worn next the skin, or thrown into the intestines by way of glyster.

The red bark has been esteemed more effectual than that formerly used, and I think it answers better, and in smaller quantities, as far as I have been empowered to observe it. An account of which has been published by Dr. Saunders, in his *Observations on the superior Efficacy of the Red Bark*, 1788. W.

repeated

Sect. 1. repeated. This, however, shall not hinder me from communicating what I have experienced in relation to the method of giving it.

The bark,
how to be
given.

34. (1.) The greatest caution must be had not to give it too early, namely, before the disease be in some measure spontaneously abated, unless the extreme weakness of the patient requires it to be given sooner; for the giving it too soon may render it ineffectual, and even fatal, if a sudden stop be thus put to the vigorous fermentation raised in the blood in order to its despumation. (2.) We must not order purging, much less bleeding, in order to carry off a part of the febrile matter, and render the bark more effectual; for they both weaken the tone of the parts, whence the disease returns so much the more speedily and certainly, after the virtue of the bark is spent. It were better, in my opinion, to impregnate the blood with this medicine by degrees, and at distant intervals from the fit, rather than endeavour to stop it at once, just upon its coming; for by this means the bark has more time to produce its full effect in, and, besides the mischief is avoided that might happen by putting a sudden and unseasonable stoppage to the immediately approaching fit. (3.) The bark must be repeated at short intervals, that the virtue of the former dose may not be entirely gone off before another be given; and by repeating it frequently, the disease will, at length, be perfectly cured.

35. These reasons led me to prefer the following method of giving the bark:

The electuary.

*Take of the Peruvian bark, one ounce; syrup of roses, two ounces; make an electuary thereof; take the quantity of a large nutmeg every morn-
ing*

ing and night, on the intermediate or well days, Chap. 5.
till the whole be taken; and let it be repeated
thrice, interposing a fortnight between each time.

36. The bark might perhaps prove as successful Medicines not needful in children and young persons.
in *vernal* and *autumnal tertians* as it does *quartans*: but, to speak ingenuously upon this occasion, in children and young persons, affected with either of these diseases, I think it best to forbear the use of medicines, and make no change as to air and diet; having hitherto found no inconvenience in leaving the cure wholly to nature, at which I have often been surprized, especially in infants; for the depuration of the blood being finished, these distempers go off spontaneously. But contrariwise, if (1.) a slender diet be directed; or (2.) purgatives be now and then given, as they generally are, under pretext of opening obstructions, and discharging the humours lodged in the first passages; or (3.) especially, if bleeding be used in an epidemic constitution, the disease will be considerably prolonged, and also accompanied with several dangerous symptoms.

37. But in aged persons, affected either with *autumnal tertians* or *quartans*, there is danger of The aged require cordials, and a strengthening diet.
these diseases becoming not only obstinate, but mortal; for which reason, if the bark and every other method prove ineffectual to a cure, nature must at least be supplied with such helps, as may enable her to finish her work. For doubtless, in weak bodies, unless the fermentation be kept up by cordials, a strengthening diet, wormwood wine, and the like, the patient will be debilitated by irregular and ineffectual fits, and the disease continue, till a violent fit comes, which, by reason of his extreme weakness, may destroy him

Sect. 1. him in the cold fit. And this frequently happens in aged persons, who have been weakened by a long course of purgatives; whereas they might have been supported, at least for a short space, by some sufficiently strong cordial.

And change
of air.

38. When the time required for the despumation of the blood is finished, or even earlier, persons in years should remove to a very different air, or which is better, to a warmer climate, or at least leave the place where they were first seized with this disease. It is very surprizing *how much a change of air conduces to a perfect cure* * at this juncture, but before it is not only needless but improper. For though a person were to go to a warm *southern* climate, the blood, notwithstanding, being once reduced to this morbid state, must necessarily finish its depuration, which would vainly be expected from breathing a new and unusual air, till the motion thereof be mended, and so far perfected, as to be capable

* *The change of air conduces to a perfect cure, &c.* This has been abundantly confirmed by experience; for numberless patients have recovered by removing into an air, different to that in which the disease was contracted and continued: perhaps the removal into that which is warmer may be the most salutary; but if that cannot be accomplished, any other air, where the change is considerable, will prove effectual. I have known a gentleman who was seized with the ague in London, being under the necessity of visiting the marshes of Essex, where intermittents are endemial, perfectly recover during his residence there: though one would not recommend such a change of situation, still it affords a strong proof of the utility of atmospheric influence: and I cannot avoid being of Dr. SWAN's opinion, "That it is
" needless, if not dangerous, to defer the change of air,
" till the constitution be nearly worn out, which may probably be the case before the distemper be so far spent, as
" SYDENHAM seems to think requisite, in order to make an
" attempt of this kind with safety and certainty." *W.*

of

of recovering a healthful state. Such a remark Chap. 5:
able change of air, therefore, is to be deferred
till the distemper can be removed; so that in a
quartan, for instance, which arose in *autumn*, it
should be deferred till the beginning of *February*.

39. *But if the patient does not care to change the* If not, the
air,* or cannot conveniently, he ought at this fermentation
to be quick-
ened.
juncture to make use of a medicine of sufficient
strength at once to promote, and, if possible,
to finish the languishing fermentation; for
which purpose I would advise the following :

*Take of the electuary of the egg, or Venice trea- The mix-
ture.*
cle, one dram and a half; aqua cœlestis, or
*common aqua vitæ, two ounces : make a mix-
ture, to be given two hours before the fit.*

I have used this medicine with success at the de- But not till
the declen-
sion of the
disease.
clension of the disease; but I acknowledge, that
if such heating medicines be given sooner, they
either double the fit, or change the disease to a
continued fever; which has also been observed
by *Galen*. They may be given with caution to
young persons in this disease, but are unsafe in
children.

* *If the patient does not care to change the air, &c.* In
this state of the disease the constitution becomes highly debi-
litated, and requires such modes of treatment as may invigo-
rate the system, and enable it to stand against the power of
the disease, till it shall have finished its course; or the alte-
ration of the season put a period to its existence, which is
often the case in obstinate intermittents. Gentle exercise,
nutritious diet, and moderately cordial chalybeates, with a
course of deobstruent gums, seem here the most judicious
auxiliaries. Perhaps it is from this practice of our author;
the idea of giving opiates before the fit has been taken. On
this state it appears not consonant to sound reason; for they
for a time render the habit too torpid, and afterwards leave
it in too relaxed a condition—two circumstances which
ought particularly to be avoided. *W.*

Sect. I. 40. Before I quit this subject, I must observe that what has been said concerning the continuance of *autumnal intermittents*, and the time required for the despumation of the blood, is to be understood of that alone which nature usually finishes by means only of the common medicines in use. For in treating of these matters my intent is not to discourage able and diligent physicians from searching after better methods of cure, and more effectual remedies in these diseases; so far otherwise, that I do not despair myself of discovering, in time, such a method or remedy.

Purging necessary after it is gone off,

41. *After the disease is cured, the patient must be carefully purged;** for an almost inconceivable number of diseases proceed from want of purging after autumnal intermittents, and I am astonished this is so little noted and guarded against by physicians. For whenever either of these diseases affected persons in the decline of life, and purging was neglected, I could certainly foretel, that they would be seized with some dangerous

* *After the disease is cured, purging, &c.* It is right to have the body kept gently open by rhubarb, or some such similar medicine; but purging should be avoided, as it disposes greatly to a relapse, and may produce dropfy; it is much better to repeat the use of the bark, from time to time, at proper intervals: though it may some time be thought necessary, perhaps, to have recourse to cathartics, particularly when we have reason to suspect the disease has left behind it any visceral obstructions; but in these cases a constant use of chalybeates, with deobstruent gums and bitters, or the warm antiscorbutics, mixed with aperients, are most to be depended upon; as these medicines tend to open the obstructions, promote digestion, invigorate the system, and guard against the effects likely to be produced by the peculiar morbid miasmata, by putting the constitution in such a state as to render it incapable of feeling their action. W.

disease

disease afterwards, though they themselves had not the least suspicion of it, on account of their seemingly perfect recovery. Chap. 5.

42. But purging must by no means be used till the disease is quite cured, because though the *natural parts*, or intestines, may seem to be cleansed hereby from the foul humours left there by the intermittent, yet fresh matter will soon be supplied by the return of the fever, occasioned by the violence of the cathartic, and the disturbance of the substance of the juices; whence the disease will become more obstinate. And daily experience shews that such as, in the declension of the disease, comply with that theory, which makes the cure consist wholly in removing obstructions, and evacuating the melancholy humour, suffer much by repeated purges; which, whatever be the nature of the humour discharged, exasperate the fever, and so render it much more inveterate than it would otherwise have been. But not before.

43. For this reason I never give a purge till both the perceptible fits are entirely gone off, and the alteration likewise (how slight soever it be) which is perceived on those days when the fit usually came, and even not till a month afterwards; and then I prescribe a common laxative potion, ordering it to be repeated once a week for two or three months; and a quieting draught to be taken in the evening after the operation, to prevent the return of the fit, which might otherwise happen from the disturbance which even the mildest cathartics are apt to raise. Method of purging.

44. I direct purging at these considerable intervals, that a relapse may not be apprehended; The reasons for it.

Sect. 1. which indeed might easily be caused by the too frequent agitation of the blood and juices; but when there is no further danger from this quarter, I prescribe the following apozem:

Take of Monk's rhubarb, two ounces; the roots of asparagus, butcher's broom, parsley, and polyphy of the oak, of each one ounce; of the inner bark of ash, and of tamarisk, each half an ounce; the leaves of agrimony, spleenwort, and maiden hair, each one handful; sena cleansed from its stalks, and moistened with three ounces of white wine, an ounce and half; dodder of thyme, half an ounce; troches of agaric, two drams; fennel seeds, four scruples: boil them together in a sufficient quantity of water to a pint and half; adding towards the end three ounces of the juice of Seville oranges: lastly, strain off the decoction, and mix therewith of the syrup of succory with rhubarb, and of the magisterial syrup for melancholy, of each one ounce and a half. Take half a pint of it every morning for three days running, and let it be repeated as there shall be occasion.

Vernal intermittents have fewer symptoms than autumnal ones.

45. I proceed now to enumerate the symptoms which accompany intermittents in their decline; and here it must be noted, that vernal ones have very few, compared with autumnal; because they are neither so lasting, nor arise from such earthy and malignant juices.

A dropfy a capital symptom in the latter.

46. *The principal of these symptoms,** which occasionally happens, is a dropfy; wherein the legs first

* *The principal of these symptoms is a dropfy, &c.* This species almost always arises from the system being debilitated, whence the absorbents do not act so freely as they ought, but

first swell, and then the *abdomen* : it arises from Chap. 5.
 a paucity of spirits, occasioned by frequent fermentations of the blood, in consequence of the length of the disease, especially in the aged ; so that being extremely impoverished, it can no longer assimilate the juices taken in with the aliment, a crude and indigested quantity whereof is, at length, thrown upon the legs ; and these being so distended as to admit no more, the remainder is discharged into the *abdomen*, and thus forms a *true dropsy*. But this disorder rarely happens in young persons, unless it has been imprudently occasioned by frequent purging during the course of the intermittent.

47. A recent *dropsy* from the above mentioned cause is easily cured by aperients and purgatives ; How to be treated.
 neither am I anxious about the consequences when it proceeds from this cause, for then I conceive great hopes of success ; and, in reality, have recovered several by the use of the apozem above set down, (44.) even without the mixture of any thing more appropriated to the dropsy. But I have observed, that it is to no purpose to endeavour to cure it by purging,* whilst the inter-

But suffer the serous part of the fluids to be collected in the cellular membrane and cavity of the abdomen ; hence patients become anasarcaous and ascitical, for very rarely any other species make their appearance from intermittents. *W.*

* *To no purpose to endeavour to cure it by purging, &c.*
 This direction is very proper, for this mode would rather contribute to increase the cause. Tonics, joined with diuretics, are certainly the remedies most proper in these cases, such as will keep to invigorate the system, particularly the digestive powers ; hence bark, joined with steel, and those medicines mentioned in the succeeding paragraph, claim the preference. But should the disease continue after the intermittent has been subdued, we may have recourse to some other

Sect. 1, } intermittent lasts, which only renders that disease more obstinate without relieving the dropsy; for which reason we must wait till the intermittent is conquered, and then the cure of the dropsy may be successfully undertaken.

Infusions -
proper in
this case.

48. But if the distemper be so urgent as not to admit of this delay, the cure must be attempted by infusions of *horse-radish root*, *the tops of worm-wood*, and *the lesser centaury*, *juniper berries*, *broom ashes*, &c. in *wine*; which not only give relief by supplying the blood with fresh spirits, but likewise seasonably assist nature now upon the point of overcoming the disease.

The rickets,
and the me-
thod of cur-
ing them de-
scribed.

49. Children sometimes become hectic after both *continued* and *intermittent autumnal* fevers. The *abdomen*, in this case, swells and grows hard, a cough also and other consumptive symptoms frequently arise, which manifestly resemble the rickets: such patients must be treated in the following manner: According to the age of the child * give it a spoonful or two, more or less, of the purging potion above set down, every morning, for nine days, intermitting a day or two if need be; and in the mean time the purgative must be so proportioned, either by increasing or diminishing the dose, as to give but five or six motions a day. When the course of purging is over, let the *abdomen* be anointed with

of the remedies which we shall find enumerated in the cure of dropsy; observing only, that our election should rather fall on those medicaments which act as diuretics, than purgatives; for this dropsy is seldom obstinate, or attended with any danger, provided the viscera remain in a sound state: and De GORTER has very rightly observed, that in these cases the water has been frequently soon evacuated by the kidneys, without the aid of any medicine.

* See Sect. I. Chap. iv. Par. 35.

an opening liniment for some days; I generally use the following : Chap. 5.

Take of oil of lilies and tamarisk, each two ounces; the juice of briony roots and smallage, of each one ounce; boil them together till the aqueous moisture is exhaled; then add thereto of the ointment of marshmallows, and fresh butter, of each an ounce; of gum ammoniac, dissolved in a proper quantity of vinegar, half an ounce; of yellow wax, enough to make the whole into a liniment.

A liniment for anointing the abdomen.

By this method I have cured several children of the true rickets. But the caution, before inculcated, concerning purging, must also be observed here.*

50. It is worth observing, that when children have been long afflicted with autumnal intermittents, there is no hopes of vanquishing the disease till the *abdomen* (especially that part of it near the spleen) swells and grows hard; the distemper abating in the same degree, as this symptom manifests itself. Nor can we, perhaps, more certainly foretel that the intermittent will go off in a short time, than by carefully attending to the swelling of the *abdomen*, in children, and to that of the legs, which sometimes happens in grown persons.

The swelling of the abdomen in children, and of the legs in grown persons, a good sign.

51. The swelling of the *abdomen* which happens in children after intermittents, in those years wherein the constitution of the air has a tendency to produce autumnal intermittents epidemically, appears to the touch, as if the *viscera* contained matter hardened to a *schirrus*; where-

The true rickets when most common.

* See Sect. I. Chap. iv. Par. 35.

Sect. 1. as that which comes in other years yields to the touch, as if the *hypocondria* were only distended by wind. Hence it is worth notice, *that the true rickets rarely happen,** except in those years where-
in *autumnal intermittents* prevail.

Pain and inflammation of the tonsils, &c. bad signs.

52. A pain and inflammation of the tonsils, after continued or intermittent fevers, attended first with a difficulty of deglutition, succeeded by a hoarseness, hollow eyes, and *hippocratic* face, certainly foreshew imminent death, without any hopes of recovery. And I have generally observed, that profuse evacuations in patients almost worn out by the violence of the disease, together with the long continuance thereof, have conspired to produce these fatal symptoms.

A peculiar kind of madness, how to be treated.

53. There are several other symptoms, which usually follow these diseases, from a total neglect of purging, or an improper use of it; but I shall not mention them here, as they all require nearly the same method of cure, *viz.* the purging off the sediment deposited by the preceding effervescence, which, by its continuance in the body, has given rise to these bad symptoms. It may, however, be proper here to take notice of a considerable symptom, which neither yields to purging, nor any other evacuation, and especially not to bleeding, but is rendered more violent thereby. This is a peculiar kind of *madness*, which sometimes follows upon inveterate inter-

* *The true rickets rarely happen, &c.* This may in some degree be true, and those seasons may contribute much towards assisting in bringing on this complaint; but it arises from different sources, and happens at all seasons independent of this circumstance, where the particular causes, of which it is the offspring, act upon the constitution. *W.*

mittents,

mittents, especially quartans; and yields not to the ordinary method of cure, but after copious evacuations, degenerates into a lamentable kind of folly for life. Chap. 5.

54. I have often been surprized to find no mention made of this disorder by practical writers, as I have frequently met with it; and whereas the other kinds of madness usually yield to plentiful bleeding and purging, this will bear neither; for when the patient is almost recovered, if a glyster only of milk and sugar be given, it immediately returns; and if repeated bleeding and purging be used, these evacuations may indeed abate the violence of the disease, but will certainly render the patient an idiot, and quite incurable. Nor will this seem strange, if it be considered that the other kinds of madness proceed from the too great spirituousness and richness of the blood, whereas this arises from its depressed state and vapidity, as I may term it, occasioned by the long fermentation carried on by the fever, whence the spirits become utterly unable to perform the animal functions. Mischief of repeating bleeding and purging here.

55. I treat this disorder in the following manner: I give a large dose of some strong cordial three times a day; for instance, *VENICE treacle*,* *the electuary of the Egg*, *the Countess of KENT's powder*, *Sir WALTER RALEIGH's powder*, or the like, dissolved in *plague* or *treacle* water, or any other cordial water. Cordials may also be given in other forms. During the course The process of the cure.

* *Venice treacle*, &c. Venice treacle is indeed a warm opiate, but I much doubt if it deserves to be entitled a cordial in this case, as the opium it contains should seem to relax and debilitate, more perhaps than the other ingredients will strengthen and raise: but it is now very judiciously thrown out of the London Pharmacopæia.

of

Sect. I. of the cure, a slender but restorative diet, and generous liquors must likewise be used; and the patient should keep his room, and lie much in bed. This regimen may occasion a costiveness, whence a fever may be apprehended, especially from the use of these heating medicines: but there is in reality no danger of it, because the spirits are so far wasted by the preceding disease, as not to be able to raise a new fever. In a few weeks the disorder will abate by degrees, and then the cordials may be omitted for a few days; but the restorative method of living must be continued, and the cordials repeated, after a short interval, and persisted in till the perfect recovery of the patient.

Successful in another species of madness.

56. This method has sometimes cured a *madness* that did not succeed *intermittents*, particularly in cold and weak constitutions. I was called last year to *Salisbury*, to consult with my friend Dr. *Thomas* for a lady, who was greatly disordered in her senses, and she was recovered by it, though she was then in her pregnancy.

57. *But the common kind of madness*,* where- with lively persons are usually seized, without a pre-

* *But the common kind of madness, &c.* The immediate cause of mania is now agreed to arise from an increased excitement of the brain, and appears to be corroborated by the modes of cure employed in modern practice. Dr. Swan, in his note, recommends BLEEDING more plentifully and frequently, especially in young and sanguine persons, than what is here specified by SYDENHAM. In recent cases, and where there is a frequent full pulse, or any marks of increased impetus of the blood in the head, it is proper and very necessary; but when the disease has been of long standing, it is seldom found useful; and though local bleeding has been recommended, generally performing the operation in the arm in an erect posture, nearly to a deliquium animi,

a preceding fever, is of another kind, and must therefore be treated in a very different manner, with respect to evacuation; though even in this

Chap. 5.

animi, will be sufficient. BRISK VOMITS.—These seem doubtful, for do they not impel the blood too forcibly into the vessels of the brain, and therefore increase, or do they determine the fluids to the surface of the body powerfully, and thereby diminish the tension and fullness of the vessels, and decrease the excitement of the brain?

COLD BATHING.—This has been beneficial, not from the cold it communicates in general to the habit, but from the surprize it occasions, and fear; for to be serviceable, the patient should be suddenly immersed, and detained a length of time therein: and great benefit may be induced by the application of cold to the naked head, either by means of snow, ice, or a clay cap.

CAMPHIRE—from the practice of Dr. Skinner, half a dram is to be given night and morning: and

WARM BATHING—from Hoffman, who says, “It is not from reason alone, but from a long course of experience, that we assert the excellence of this remedy in these cases; for we have seen numerous instances, both of inveterate melancholy, and raving madness, happily cured by its means, after the use of bleeding, diluting medicines, and medicines consisting chiefly of nitre: and this kind of cure I have recommended to many foreign physicians, who, as well as myself, find it highly serviceable and beneficial.” Dr. Cullen asserts he has found it rather hurtful to maniacs, but in rigid melancholic habits he thinks it may be useful, if the lower part of the body is immersed in warm water, and cold water poured upon the head and upper parts. Besides these, there are other things considered as particularly useful—*restraint, confinement within doors, the removal from friends, and familiar objects; fear, impressed by various means; keeping as much as may be in an erect posture; avoiding all irritation, and means of fullness; promoting frequent intestinal evacuations by purgatives, particularly the cooling purges, the most eligible of which, from experience, has been found to be soluble tartar; shaving, or rather blistering the head, opium, hard labour, and taking a journey.*—See Cullen’s *Practice of Physic*, page 154, sect. 1562, &c. All which tend to prevent, take off, or alleviate the too great excitement of the brain. W.

kind

Sect. 1. kind also, such medicines should be given as strengthen the brain and animal spirits. I shall here subjoin the cure thereof, though it does not properly belong to this place, to prevent any person's being deceived by the similitude of the diseases.

The common kind of madness how to be treated.

58. In young persons of a sanguine constitution, let eight or nine ounces of blood be taken away from the arm; and repeat the operation twice or thrice, at the distance of three days; after which, bleed once in the jugular: more frequent bleeding rather renders the patient an idiot than cures him. Then give half a dram, or two scruples of *pil. ex duobus*, according as it operates, upon a set day, and repeat it only once a week, precisely upon the same day of the week, till the disorder goes off. By this method the humours, which, in this disease, usually fly up to the head, will gradually be diverted to the lower parts.

59. On the intermediate days, during the course of the cure, give the following electuary, or some other medicines of the like kind:

A cordial electuary.

Take of the conserve of Roman wormwood, of rosemary, and of Venice treacle, each one ounce; of the conserve of orange peel, of candied angelica and nutmeg, each half an ounce; syrup of cloves, enough to make the whole into an electuary; of which let the quantity of a nutmeg be taken twice a day, drinking after each dose a small draught of canary, wherein cowslip flowers have been infused cold.

60. The continued fever and intermittents above described were almost the only prevailing epidemic diseases, during the constitution of the years

years 1661, 1662, 1663, and 1664. How Chap. 5.
 many years they might have prevailed before I
 cannot say; but this I certainly know, that
 from 1664 to 1667 they rarely appeared at
 London.

61. I should treat likewise of the *small pox* of
 that constitution, since, as I before observed,
 they vary considerably, according to the diffe-
 rent constitutions wherein they appear: but as I
 did not sufficiently attend to them at that time, I
 shall only mention this peculiarity of them, *viz.*
 that in those years they prevailed much in the
 beginning of *May*, but went off, upon the com-
 ing of the *autumnal epidemics*, namely, the *con-*
tinued and *intermittent fevers*. The tops of the
 eruptions had small pits for the most part, about
 the size of the head of a small pin, and in the
 distinct kind the *eighth day* was attended with
 most danger; at which time the sweat and moi-
 sture, which had hitherto continued, went off
 suddenly, and the external parts became dry,
 neither could the sweat be raised again by any
 kind of cordials; a *delirium*, great restlessness,
 pain and sickness, a frequency of making urine
 in small quantities succeeded, and the patient
 died in a few hours very unexpectedly.

Particulars
 concerning
 the small
 pox of this
 constitution.

SECTION

The epidemic Constitution of the Years 1665 and 1666, at London.

The diseases
of this con-
stitution
enumerated.

1. **T**HE preceding winter having been extremely cold, and accompanied with a continued frost till spring, which went off suddenly towards the end of *March*, that is, in the beginning of the year 1665, according to the *English* computation of time, there then arose *peripneumonies*, *pleurifies*, *quinsies*, and other inflammatory disorders, which quickly made great devastation; and with these there also appeared a continued *epidemic fever*, of a very different kind from those of the foregoing constitution, which usually seized scarce any body at that time of the year. For (1.) the pain in the head here was more violent; (2.) the vomitings more copious; (3.) and the looseness, which was generally prevented in the former fevers by a vomit, was increased thereby in the present fever, and yet the vomiting continued; (4.) the external parts were dry, as in the fevers of the preceding constitution; but after bleeding, especially, a sweat was easily procured, and being encouraged soon abated the symptoms; and this might be done at any time of the disease, whereas in those fevers it could not be safely attempted till the thirteenth or fourteenth day, and was not easily raised then; (5.) the blood taken away in this fever often resembled that of persons in pleuritic and rheumatic disorders, but was less fizy.

2. These

2. These were the diagnostic signs of this disease at its rise; but towards the middle of the year the *plague* appeared, accompanied with several of its peculiar symptoms, as *carbuncles*, *buboes*, &c. and spreading more and more every day, came to its height about the *autumnal equinox*, at which time it destroyed near eight thousand persons in one week, though at least two thirds of the inhabitants had retired into the country to avoid the infection. Afterwards it began to abate, and was so far conquered by the winter's cold, as to seize very few during that season, and the following spring, when it went off entirely; whereas the fever prevailed, (though not so epidemically) all the subsequent year, and continued to the spring of the year 1667. I proceed now to treat of this *fever* and the *plague*.

Chap. 2.

The *plague* and its progress described.

CHAP. II.

Of the pestilential Fever and Plague of 1665 and 1666.

1. I HAVE already cursorily observed, that some fevers are usually ranked *amongst those* falsely esteemed malignant. *of the malignant kind,** whereas the great violence of

* *Amongst those of the malignant kind, &c.* Though the term malignant, as applied to fevers, is not in general used at this day, yet the ancients had a species of fevers which went under this denomination; and they defined the word malignity to be the offspring of the worst kind of latent cacoehymia, and consisted in a peculiar corruption and dissolution of the humours and spirituous liquids, or putrefaction conjoined with too great prostration of vital and animal strength;

Sect. 2. of their symptoms, which seems to countenance this opinion, does not proceed from the contagious nature of the disease, but from unskilful treatment: for when we do not closely enough attend to the solution thereof appointed by nature, but inconsiderately pursue a different method, we greatly disorder the animal œconomy; whence the disease, contrary to its nature, now different from what it used to be, is accompanied with several irregular symptoms. But a true *malignant* fever rarely happens, and totally differs from other kinds of fevers, that are so called from the irregularity of the symptoms, being indeed of the same species with the plague, only not so violent; for which reason I will treat of the cause and cure of both in the same chapter.

A true malignant fever rare.

The air produces diseases by a secret disposition,

2. That the air obtains a secret disposition or temperature, productive of different diseases at different times, is apparent to such as consider that the very same disease, in one season, proves epidemic, and destroys great numbers, and in another seizes but few persons, without proceeding further; as is manifest in the *small pox*, and more particularly in the *plague*, our present subject.

not easily discoverable.

3. *But of what nature the constitution of the air is,** which gives rise to these diseases, I am as

strength; or that corruption might come from contagion, or some internal cause. From whence Sydenham has evidently taken his idea, in his application of the term in this place. And Dr. Huxham thought it not inapplicable in his time to putrid and pestilential fevers, as he considers them synonymous, in order to distinguish them from those of the inflammatory kind. *W.*

* *But of what nature the constitution, &c.* There are many phenomena that exceed our narrow comprehension; which

as ignorant, as of several other things, about Chap. 2. which philosophers cannot agree; whatever it be, ought at least to thank God that he permits pestilential constitutions of the air, productive of that great destroyer the *plague*, to happen much more rarely than such as produce less fatal distempers: for the *plague seldom rages violently in England*,* above once in thirty or forty years. A few persons in different places die of this disease for some years after a great *plague*, and it usually goes off by degrees; because the pestilential constitution of the air continues still in part, and is not yet entirely changed to a more healthful state; this therefore should be esteemed only as the gleanings of a preceding harvest. To the same cause it is owing, that the fevers which prevail for a year or two after a severe *plague*, are generally pestilential; and though some have not the genuine signs of the *plague*, yet they are much of the same nature, and require the like treatment, as shall hereafter be shewn.

4. But besides the constitution of the air, as Causes of a more general cause, there must be another the plague: previous circumstance to produce the *plague*, viz. the receiving the *effluvia*, or *seminium*, from

which are not therefore to be contemned; but where the nature of the cause cannot be known from reasoning, the effect should always be carefully noted, in order from thence to form safe rules for practice.

* *The plague seldom rages violently in England, &c.* This error has not only been adopted by SYDENHAM, but many other authors of great eminence; on what their opinions were founded cannot be conjectured—however, from happy experience we are made certain of the contrary, for three times the period here specified has elapsed without so melancholy and lamentable a visitation. W.

Sect. 2. an infected person, either immediately by contact, or mediately by pestilential matter conveyed from some other place. And when this happens in such a constitution as we have mentioned above, the whole air of that tract of land is quickly infected with the plague, by means of the breath of the diseased, and the steam or vapour arising from the dead bodies, so as to render the way of propagating this dreadful disease by infection entirely unnecessary: for though a person be most cautiously removed from the infected, yet the air received in by breathing will of itself be sufficient to infect him, provided his juices be disposed to receive the infection.

Time of its
rise, and its
progress.

5. Though this distemper, when it is only *sporadic*, seizes some few persons without any regard to the season, the infection being, as it were, communicated from one to another; yet, when an epidemic constitution of the air likewise prevails, it arises in the intermediate season between spring and summer; this season being the fittest to produce a disease, the essence of which chiefly consists in an inflammatory state of the juices, as we shall afterwards shew.— Again, this disease has its times of increase and declension, like other kinds of natural things: it begins at the time above set down, as the year advances it spreads, and as that declines it abates, till, at length, winter introduces a state of the air contrary to it.

If not influenced by the

6. For if the *changes of the season* * were to have

* For if the changes of the season, &c. Do not the changes of the season produce great alterations in the air? And may it not be from that cause that the subduction of the

have no effect on this disease, the true pestilential *seminium*, unconquerable by any alteration of the air, would be conveyed from one person to another in a continued succession; so that when once it had got into a populous city, it would rage more and more, and never cease till it had destroyed all the inhabitants; but that the contrary frequently happens, appears from the number of the dead, which rose to some thousands in one week in *August*, but decreased very much, and was inconsiderable towards the end of *November*. I must own, however, what some authors have likewise asserted, that the *plague* appears at other seasons of the year; but this seldom happens, and it is not then very violent.

Chap. 2.

changes of the season, would prove exceedingly destructive.

7. Mean time I much doubt if the disposition of the air, though it be pestilential, is of itself able to produce the *plague*; but the plague, being always in some place or other, it is conveyed by pestilential particles, or the coming of an infected person from some place where it rages into an uninfected one, and is not epidemic there, unless the constitution of the air favours it. Otherwise I cannot conceive how it should happen that *when the plague rages violently in one town* * in the same climate, a neighbouring one should

A pestilential air unable of itself to breed the plague.

the plague might be owing, as cold is capable of correcting and suppressing that acrimony which is diffused and supported by heat? Dr. Mead seems to be of this opinion, and accounts for the decrease of the plague in November, by supposing an emendation of the qualities of the air, and restoring it to a healthful state—circumstances capable of dissipating and suppressing the malignity.—Mead on the *Plague*, pag. 66. *W.*

* *When the plague rages violently in one town, &c.* It does not appear that the *air*, however corrupted, is usually

Sect. 2. should totally escape it, by strictly forbidding all intercourse with the infected place: an instance of which we had some few years ago, when the plague raged with extreme violence in most parts of *Italy*, and yet the Grand Duke by his vigilance and prudence entirely prevented its penetrating the borders of *Tuscany*.

The symptoms of the plague.

8. The plague usually begins with chillness and shivering like the fit of an intermittent; soon after, a violent vomiting, a painful oppression at the breast, and a burning fever, accompanied with its common symptoms succeed, and continue till the disease proves mortal, or the kindly eruption of a *bubo*, or *parotis*, discharges the morbid matter, and cures the patient. Sometimes the disease, though rarely, is not preceded by any perceptible fever, and proves suddenly mortal; the purple spots, which denote immediate death, coming out, even whilst the persons are abroad about their business. But it is worth observing, that this hardly ever happens but in the beginning of a very fatal *plague*, and never in its decline, or in those years wherein it is not *epidemic*. Again, sometimes swellings appear, without having been preceded either by a fever, or any other considerable symptom; but I conceive that some slight and obscure shivering always precedes the seizure: Now, such as are attacked in this favourable

usually capable of carrying infection to a very great distance; but that commonly the *plague* is spread from town to town by infected persons and goods: for there are numberless instances, where the *plague* has caused a great mortality in some towns, while other towns and villages, near them, have been entirely free. See Dr. Mead on the *Plague*, pag. 66.

manner

manner may safely follow their business, as if Chap. 2.
 they were in health, and need not observe any
 particular way of living.

9. *As to the essence of this disease,** I do not un-
 dertake to define it with exactness; and whoever
 should The essence
 of this and
 other diseases
 inexplicable.

* *As to the essence of this disease, &c.* Of this little can
 be said, as the particles or miasmata of which, on being
 received into the human machine constitutes the disease, are
 not objects of our senses, and hence their nature is to us
 undiscoverable. Hoffman says, "the plague or pestilen-
 tial fever, is the most acute of all the species of the acute
 fevers, proceeding from a contagious or poisonous semi-
 nium, or miasm, usually brought from the eastern parts,
 and proving mortal, unless the poison be soon expelled by
 buboes or carbuncles by the vigour of the vital motions or
 powers." But the only way we have of acquiring any
 knowledge relative to this subject, is from adverting to the
 effects produced, which Dr. Cullen has collected from va-
 rious authors who have written the latest upon the subject,
 and given their observations from practice. From these he
 selects the distinguishing circumstances, and draws judicious
 inferences.

In this disease, and particularly in the most violent, and
 most dangerous states, are observable,

1st. The great loss of strength in the animal functions,
 which often appears early. 2dly. The stupor, giddiness,
 and consequent staggering, which resemble drunkenness, or
 the head ach, and various delirium; *all symptoms denoting a
 great disorder in the functions of the brain.* 3dly. The an-
 xiety, palpitation, syncope, and especially the weakness and
 irregularity of the pulse, *which denote considerable disturbance
 in the action of the heart.* 4thly. The nausea and vomiting,
 particularly of bile, *which shows an accumulation of vitiated
 bile in the gall bladder and biliary ducts,* and from thence de-
 rived to the intestines, and stomach; *symptoms supposed to de-
 note a considerable spasm and loss of tone in the extreme vessels
 on the surface of the body.* 5thly. The buboes and carbun-
 cles, *which denote an acrimony prevailing in the fluids.* And
 lastly, the petechiæ, hæmorrhagics, and colliquative diar-
 rhœa; *which denote a putrescent tendency, prevailing to a great
 degree in the mass of blood.*

From all which he concludes, the plague to be a specific
 contagion

Sect. 2. should call upon me to shew what it is that constitutes any particular species of a disease, might perhaps seem as impertinent, to the thinking part of mankind, as I should appear, were I to ask him the same question about a horse, for instance, amongst animals, or botany, amongst plants. For nature produces whatever she causes to exist by fixed laws, and a method of operating known only to herself, and conceals the essence and constitutive differences of her productions in the greatest obscurity. Hence every species of diseases, as well as of animals and vegetables, is endowed with certain peculiar and univocal properties, resulting from its essence. However, an inquiry into the manner

contagion often suddenly producing the most considerable symptoms of debility in the nervous system and moving powers, as well as general putrescency in the fluids, and sets down their united circumstances as the proximate cause from whence he deduces his mode of cure. He arranges it amongst his order of exanthemata, and defines it a highly contagious typhus, or nervous fever attended with extreme debility, bubos or anthraxes breaking out, not on any particular day of the disease, varying in its degree of violence, but its species dubious.

Dr. Swan has pointed out in what it differs from other contagious and eruptive fevers. 1st. It is the most acute of them all, and sometimes proves mortal the first or second day. (2.) In our climate it is neither *epidemic* nor *sporadic*, but only caused by contagion brought from infected places. (3.) It does not go off, like other putrid and malignant fevers, by a copious sweat, a looseness, &c. but is terminated *critically* by humours that come to suppuration. (4.) The pestilential *seminium* readily adheres to spongy and porous matters, and is conveyable thus to a great distance, without any loss of its pernicious quality. And (5.) the plague has this farther remarkable particularity, that its progress is checked by cold; whence it seldom, if at all, prevails in a cold season, and in cold countries, but, on the contrary, rages violently and frequently in a hot season, and in warm climates.

of

of curing diseases, may proceed very successful-ly, though we are ignorant of their causes, because the cure of most diseases is not effected by this kind of knowledge, but by a suitable and experienced method. Chap. 2.

10. But to return to our subject : As the rise of all similar diseases is usually deduced by us, in our present ignorance of things, from some depravation of the first or second qualities, it is probable that the plague is a peculiar fever of its own kind, arising from an inflammation of the more spirituous particles of the blood, which, by reason of their fineness and subtlety, seem most likely to receive it. When it is possessed of the highest degree of subtlety, it suddenly dissipates the natural heat, and destroys the patient, as is manifest in the beginning and height of an epidemic constitution. The bodies of such as perish thus suddenly by the violence of this disease, are totally covered with purple spots, the fibres of the blood being broken, and its texture wholly dissolved, by the violence of the intestine struggle. The cause of the plague.
Whence it occasions sudden death.

11. Now this fatal catastrophe may be occasioned by the exceeding subtlety of the contagious matter, even without a febrile ebullition, or any other perceptible symptom ; quite otherwise than when the morbific cause is not so subtle, and the instrument that endangers life more obtuse, which is often the case. To shew the difference by a familiar example : * *Let a needle, or any other sharp-*

* *Let a needle, or any other sharp-pointed instrument, &c.*
The simile here used is very inadequate, and not at all illustrative of the author's reasoning ; and many such occur in his writings. It must be acknowledged, this method of
I 4 illuf-

Sect. 2. sharp-pointed instrument, be forcibly thrust under a pillow, and instead of raising it up, as an obtuse instrument would do, it will go through it.

And when chiefly.

12. But sudden death rarely happens, and only, as before intimated, towards the beginning, or increase of the *plague*. For this disease generally begins, like other fevers, with chillness and shivering, which are soon succeeded by heat, and this continues *till the inflamed parts of the blood are expelled* * by nature to the emunctories, and there suppurated in the manner of common *phlegmons*. But if the inflammation be less considerable, it usually generates such fevers as are commonly called *pestilential*, as it frequently happens at the end of a *pestilential constitution*, and perhaps even a year or two afterwards, till that species of fevers becomes extinct.

The *erysipelas* nearly resembles the plague.

13. In my opinion, the inflammation which the *Latins* call *ignis sacer*, and we *St. Anthony's fire*,

illustration, when rightly applied, lets in great light to the argument; but if otherwise, nothing is more fallacious and inconclusive. False similies, and erroneous analogies, always render matters more obscure, and create great confusion and perplexity in the mind. With respect to similies in particular, let it be remembered that, to be perfectly conclusive, the similitude, should only be carried on between such things as fall under the same *genus*; as between animals and animals, plants and plants, minerals and minerals, and so of the rest.

* *Till the inflamed parts of the blood, &c.* SYDENHAM has considered this as an inflammatory fever; but from every account of the plague it by no means quadrates with the idea we have of fevers from that source. If we examine the symptoms, or the most successful mode of cure, it seems to be of a nature almost diametrically opposite to those attended by or productive of inflammatory diathesis, on which subject we shall speak more at large, when we come to animadvert on what our author says respecting bleeding in this disease. W.

or an *erysipelas*, is a good deal like the plague. Chap. 2.
 For skilful physicians esteem it a continued fever, arising from the corruption and inflammation of the thinner parts of the blood, which nature, to get clear of, throws out upon some external part of the body, where a tumour, or rather (for frequently there is no very remarkable tumour) a large red spreading spot, usually called a *rose*, arises; but the fever is *critically* terminated in a day or two by this tumour, or eruption, and is sometimes accompanied with a pain in the glands of the arm-pit, or groin, as in the *plague*.

14. Moreover, the *erysipelas* begins much in the same manner as the plague, *viz.* with a shivering, followed by a feverish heat; so that such as have never had this disease before judge it to be the plague, till it manifests itself at length in the leg, or some other part. To this may be added, that some authors suspect there is a kind of malignity joined with this disease, and accordingly place the cure of it in the use of sudorifics and alexipharmics. But the inflammation here, as soon as it has raised an ebullition, by means whereof the lightly parched particles of the blood are in a short time expelled, goes off spontaneously, and does no farther mischief.

15. But the plague is much more violent than an *erysipelas*; being, by its exceeding subtlety, fitted to pass through the innermost recesses of the body like lightning, and suddenly destroys the spirits, and sometimes dissolving the texture of the blood, before nature, oppressed by speedy progress of the disease, is able to raise a *feverish ebullition*, which is the common instrument she uses to expel whatever vitiates the blood.

Sect. 2.
 Caused by
 inflammation.

16. If my opinion, of this distemper's arising from inflammation, be controverted, let it be considered that the presence of a fever, and also several other particulars, confirm it ; as for instance (1.) the colour of the blood taken away here, which plainly resembles that taken away in pleuritic and rheumatic disorders ; (2.) the dark livid colour of the *carbuncles*, not unlike the mark left by an actual cautery ; (3.) the *buboes*, which are equally disposed to inflammation, as other tumours of any kind, and terminate in abscesses, as most inflammations usually do ; (4.) the season of the year in which an *epidemic plague* commonly arises, seems likewise to strengthen my opinion ; for at the same time, namely, betwixt *Spring* and *Summer*, pleurisies, quinsies, and other inflammatory diseases usually become *epidemic* ; and I never knew them more common than they were for some weeks preceding the beginning of the late *plague* at *London*. Neither is it at all material, that the very same year that proved fatal to so many thousands, was otherwise very mild and healthy, and that such as escaped the plague never enjoyed better health ; and likewise that those who recovered were not subject to a cachexy, and other indispositions, usually arising from the foul remains left by preceding distempers ; and farther, that *imposthumes* and *carbuncles*, though of the largest size, after the inflamed particles, together with the *sanies*, was discharged, were easily cured by the common surgical methods.

Alexipharmics only do service as sudorifics.

17. But here perhaps it may be asked, how it happens, if the *plague* be an inflammatory disease, that heating medicines, as most alexipharmics are, should be so successfully used, both

for prevention and cure. To this I reply, that these medicines only relieve by accident, namely by means of the sweat which they procure, whereby the inflamed particles of the blood are exhaled, and expelled; but if they fail of raising a sweat, as it frequently happens, the blood being more inflamed by this additional heat, soon manifests the bad effects of such kind of remedies. As to prevention, I am well aware how much the use of warm antidotes is generally commended, but with what advantage has not yet appeared. Too free an use of wine, and the taking of other strong preservatives every day, at set hours, have occasioned this disease in numbers of persons, who otherwise might probably have escaped it.

18. As to the cure of these fevers, some perhaps will charge me with presumption and imprudence for undertaking to treat thereof, as having lived at some distance from the town, during the greatest part of the time that the late plague prevailed, and consequently being not sufficiently furnished with observations relating thereto. But since some physicians of greater abilities, who courageously staid in town at the peril of their lives, whilst the *plague* raged, have hitherto declined publishing what they have learnt of its nature from a large practice, it is hoped every good man will excuse me for communicating my sentiments of it, founded on a few of my own observations.

19. And first the indications of cure are to be considered; which must always be directed either (1.) to assist nature in expelling the disease, by keeping closely to her method of procedure herein; or (2.) distrusting the method she usually takes to overcome

Chap. 2.

Manner of
treating the
plague.

Seft. 2. *come the intestine enemy, to substitute a different and safer one from art.* But here perhaps some may object that the *plague* may also be successfully enough treated by *anti-pestilential* alexipharmics, with forms of which the works of practical writers abound. But whether the assistance these kinds of medicines afford should not rather be ascribed to their apparent virtue of raising copious sweats, whereby they at the same time open a passage for the morbid matter to escape, than to any occult quality given them by nature to expel the pestilential poison, admits of great dispute.

Dubious
how alexi-
pharmics
relieve.

20. Neither is there reason to doubt of these alone, but likewise whether the alexipharmics of other diseases do not relieve by promoting some kind of evacuation, rather than by any inherent specific virtue. For instance, whoever (with respect to the venereal disease) asserts that *mercury* and *sarsaparilla* are true alexipharmics for the *virus* thereof, should produce some examples, where the former has sometimes effected a cure without raising a salivation or purging, and the latter without occasioning sweat; which I conceive it will be difficult to find. But to me it seems probable that the peculiar remedy of the *plague*, and proper alexipharmic of its poison, lies yet concealed in the bosom of nature, and that this distemper can only be removed by mechanical methods.

First inten-
tion of cure
more fully
considered.

21. To consider therefore the first intention above mentioned more at large, which tends to *assist nature in expelling the morbid matter, agreeably to her own method of procedure*; it must be observed that in the true *plague*, when nature of herself commits no error, nor is forced out of the way by violent measures, she finishes the cure by

by an abscess in the emunctories, whence the matter is discharged; but in a *pestilential fever* the cure is performed by an universal perspiration, through the whole surface of the body. Hence we may learn that the method of cure must be diversified, agreeable to the different procedure which nature points out in both diseases. For if one was to endeavour to discharge the matter of the true plague by sweat, it would be opposing nature, because she attempts to do it by imposthumes: and, on the other hand, to endeavour to expel the matter of a pestilential fever otherwise than by sweat, is to pursue a method directly contrary to the procedure and disposition of nature.

22. We are yet unacquainted with a set of certain remedies, capable of promoting the natural expulsion of the morbid matter in the true *plague*, or, in other words, of forwarding the eruption of the imposthumes, unless it be supposed that a strengthening diet and cordials may promote this end: but, in reality, I should greatly apprehend that the inflammation, already too violent, might be farther increased thereby. And indeed experience has convinced me that sweats are ineffectual in this case: for though I must own that when a profuse sweat has been kept up for three or four hours, and afterwards suddenly stopped, a tumour appears, yet I conceive it is not at all owing to the sweat, because there are no signs of a swelling whilst the sweat flows most plentifully, and when this is gone off, the swelling may arise, as it were, by accident, *viz.* in consequence of nature's being eased of a part of her load, whereby she was too much oppressed, by means of the sweat,

and

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Sweating
sometimes
prejudicial
in the plague.

Sect. 2. and of the considerable heating of the body by cordials given to raise the sweat. But the uncertainty and danger of driving out the morbid matter by imposthumes caused by sweat, sufficiently appears from its having proved fatal to near a third part (to speak within compass) of such as underwent the treatment. Whereas, on the contrary, several persons, in whom the tumours appeared in the regular and natural way, even whilst they were about their business, and without the least apparent disorder of any natural, vital, or animal function, recovered in a short time; unless such as happened unfortunately to fall into the hands of some unskilful practitioner, and by his advice, though in perfect health, endeavoured to sweat in bed; from which time they began to grow worse, and at length, the disease increasing, afforded a melancholy proof of the perniciousness of the advice, by their death.

Not certainly terminated by tumours.

23. Moreover, that the termination, or *critical* solution of the *plague* by tumours or imposthumentation is both uncertain and dangerous, is manifest from a *bubo*, which sometimes rises kindly at first, and with an abatement of the symptoms, but afterwards suddenly disappears, and instead thereof purple spots succeed, which are certain signs of death; and the cause of its striking in should justly seem to be ascribed to the copious sweats, intended to promote its eruption, which wasted a considerable part of the matter through the pores, that should have served to fill and keep it up.

No certain method of curing it.

24. However it be, this at least evidently appears, that Providence has graciously pointed out a certain method of expelling the morbid cause
in

in other diseases; but, for this scourge of our transgressions, has given us only a very uncertain one: and perhaps the cause of the great destructiveness of this disease may be as well ascribed to this source, as to its malignity; for in the *gout* and other diseases, where there is little suspicion of malignity, the striking in of the morbid matter proves as certainly pernicious. Hence it clearly follows, that the physician, who in the cure of other diseases ought to tread closely in nature's steps, must here renounce her guidance; and for want of strictly attending to the truth of this maxim, the *plague* has proved much more destructive, than it would otherwise have been.

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25. Since then it appears quite unsafe to follow nature in her method of curing this disease, we are in the next place to consider in what manner the second intention is to be answered, which consists in *attempting the cure by a different one*: and this I conceive is only to be effected by *bleeding or sweating*.* As to the former, I am well aware that it is generally condemned in this disease; but setting aside vulgar prejudices, I shall

Nature not to be followed here.

Bleeding or sweating most likely to relieve.

* *By bleeding or sweating, &c.* I cannot avoid thinking that SYDENHAM, when speaking so greatly in favour of bleeding, has been directed more by his favourite theory than practical observation. For he concluded all fevers to be inflammatory, produced by the commotion, ebullition, or fermentation of the blood; and influenced by that idea he seems labouring to support a practice consistent with that doctrine; for, he says, in a paragraph below, 30—"Though I greatly approve this method (bleeding), for several reasons I prefer sweating, because it does not weaken the patient so much as bleeding."—And certainly the sudden and great prostration of strength, with the rapid progress made in the putrefaction and dissolution of the fluids should prohibit

Sect. 2. I shall here briefly and equitably examine the
 } reasons usually brought against it.

26. And,

prohibit its use, except under some singular circumstances inherent in the constitution; for nothing contributes so powerfully to weaken the system, and destroy the healthful crasis of the blood, as bleeding. If it is ever allowable, it can only be where the disease attacks those who are athletic, of strong stamina, plethoric habits, whose blood is firm and dense, who are used to high living, or have been accustomed to this operation, in order to alleviate some distressing symptoms, which might themselves prove destructive, and should be performed in the very early stage of the disease, before the appearance of buboes, &c.

The application of the lancet can never be advisable indiscriminately in a disease, where debility and putrescency are the striking characteristics, as its effects must absolutely contribute to increase the powers of these mischiefs; similar to what has often been observed from this rash practice in the beginning of putrid fevers, or what are called malignant ulcerous sore throats; where ignorant pretenders to the medical art, have by these means so aggravated the disease, that it has bid defiance to all the efforts afterwards of the most skilful practitioners.

Indeed bleeding, though a remedy so apparently simple, in fevers calls for nice discernment, in order to distinguish where it may be useful, where detrimental; under the direction of mature judgement, admirable are its effects; in the hands of the uninformed, in many cases how fatal! And though in practice I know not of any remedy so noble, or that may be used with such certain success, when necessary; still am I not acquainted with any that requires in its application greater sagacity.

With regard to sweating, the following rules should be observed, That it should be excited without the use of stimulant inflammatory medicines, with as little external heat, or increase of heat of the body, as possible, and be continued for twenty-four or forty-eight hours, never less than twelve; that as long as the person can bear it, it should be carried on without admitting of sleep, and rendered universal over the whole body; that it should not be suddenly checked by cold. — See Cullen's *Practice of Physic*, vol. i. pag. 216, sect. 158.

Plentiful use of diluents are recommended, made more grateful

26. And, first, I appeal to the physicians Chap. 2.
 who continued in town during the late plague, Bleeding
 whether free and repeated bleeding, before a examined,
 swelling appeared, was ever observed to prove and how to
 fatal to any of the infected? But it is not at all be used.
 surprizing that bleeding in a small quantity, or
 after the appearance of a swelling, should al-
 ways be prejudicial: for in the former case, the
 management of the cure is taken out of the
 hands of nature, who used all her endeavours
 to raise a tumour without substituting in its stead
 any other sufficiently effectual method to expel
 the morbid matter; and, in the latter, bleeding,
 by attracting from the circumference to the cen-
 ter, occasions a directly opposite motion to that
 of nature, which is made from the center to the
 circumference. And yet nothing is more fre-
 quently urged as a capital argument, by those
 who condemn bleeding in general in this disease,
 than the mischief of bleeding in this improper
 manner; as may be collected from *Diemerbroeck*,
 and other writers of observations. But for my own
 part I cannot assent to their reasonings, till I
 know what answer they will make to the question
 above proposed.

27. It is certain that several writers of great Commended
 character have judged bleeding proper in the by many
eminent
writers.

grateful by vegetable acids, or more powerful by being im-
 pregnated with some portion of neutral salts; and in order
 to support the patient under the continuance of the sweat,
 a little weak broth acidulated with lemon juice may be fre-
 quently given; and sometimes a little wine, if the heat of
 the body be not considerable. Opiates are also the most
 efficacious and safe; but they should not be combined with
 aromatics; and probably would be rendered more effectual
 if joined with a portion of emetics, and neutral salts.—*Ibi-*
dem, vol. ii. pag. 219. sect. 691, 692, 693. *W.*

Sect. 2. plague; the principal of which are *Ludovicus Morcatus, Joannes Costæus, Nicolaus Massa, Ludovicus Septalius, Trincavellius, Forestus, Mercurialis, Altomarus, Paschalius, Andernachus, Pereda, Zacutus, Lusitanus, Fonseca, &c.* But *Leonardus Bottallus*, a celebrated physician of the last century, is the only one I know of who places the whole of the cure in as copious bleeding as we demand. I shall transcribe his words, that I may not be judged singular in this practice.

By *Bottallus*
in a high
degree.

28. “ In short (says our author) I conceive
“ there is no plague wherein bleeding may not
“ prove more beneficial than all other remedies,
“ provided it be seasonably used in due
“ quantity; but I am of opinion it sometimes
“ does no service, either, because persons have
“ recourse to it too late, or use it too sparingly,
“ or commit some error in both these particulars.”
“ And a little farther he subjoins, “ But
“ if our fears be so great, and we take away so
“ small a quantity of blood, how is it possible
“ to judge exactly what good or mischief bleeding
“ may do in the plague? For if a disease
“ (which requires four pounds of blood to be
“ taken away, in order to its cure, and yet
“ but one is taken away) destroys the patient,
“ it does not therefore prove destructive because
“ bleeding was used, but because it was
“ performed in an improper, and, perhaps, in
“ an unseasonable manner: but ill-designing
“ and indolent men always endeavour to lay
“ the fault on that, not because it did really do
“ mischief, but because they vilely desire to
“ give every body an ill opinion of it. Or,
“ supposing they do not do it out of wickedness,
“ they cannot be excused from ignorance
“ and

“ and perverseness, both which are doubtless Chap. 2.
 “ pernicious, but the former much more so.”

Then proceeding to confirm his reasonings from experience, he goes on thus: “ These particulars being attended to, no sensible person can justly censure bleeding in these diseases; but must rather highly esteem and commend it as a divine remedy, and practise it with assurance; which indeed I have done for these fifteen years past. For I found no speedier and safer remedy in pestilential diseases, than copious and seasonable bleedings in all my patients, which were exceeding numerous, both at the siege of *Rochel*, and four years ago at *Mons*, in *Hainault*, at *Paris* for these two years past, and last year at *Cambray*.” To these remarks the author adds some instances of persons cured by this method, which I here omit for brevity sake; but must beg leave to relate a very uncommon case, no way foreign to our present subject, which happened a few years since in *England*.

29. Amongst the other calamities of the civil war that severely afflicted this nation, the plague also raged in several places, and was brought by accident from another place to *Dunstar* castle in *Somersetshire*, where some of the soldiers dying suddenly with an eruption of spots, it likewise seized several others. It happened at that time that a surgeon, who had travelled much in foreign parts, was in the service there, and applied to the governor for leave to assist his fellow soldiers who were afflicted with this dreadful disease in the best manner he was able; which being granted, he took away so large a quantity of blood from every

History of
cures from
bleeding
plentifully.

Sect. 2. one at the beginning of the disease, and before any swelling was perceived, that they were ready to faint and drop down; for he bled them all standing, and in the open air, and had no vessels to measure the blood, which falling on the ground, the quantity each person lost could not of course be known. The operation being over, he ordered them to lie in their tents; and though he gave no kind of remedy after bleeding, yet, of the numbers that were thus treated not a single person died; which is surprising. I had this relation from Colonel *Francis Windham*, a gentleman of great honour and veracity, and at that time governor of the castle.—I shall set down what I have met with worth notice, with respect to this subject, when I come to deliver the few observations I was enabled to make whilst the late *London plague* prevailed.

Sweating preferred to bleeding.

Its inconveniences.

30. But though I greatly approve of this method, and have formerly experienced its usefulness in many instances, yet, for several reasons, I prefer the dissipation of the pestilential ferment by sweat, to its evacuation by bleeding; because sweating does not weaken the patient so much, nor hazard the reputation of the physician. But this, however, has its inconveniences too; for, (1.) in many, and especially in young persons of a hot constitution, a sweat is not easily raised, and the more you endeavour to raise one in such subjects, by heaping on clothes, and giving powerful sudorifics, so much the greater danger there is of causing a *delirium*, or, which is still worse, after having been deluded awhile with vain expectations, *pestilential spots* are at length forced out instead of sweat.

31. (2.)

31. (2.) As the chief malignity of this disease lies in the most spirituous parts of the blood, whence the motion of its grosser particles is generally somewhat more languid than in other inflammations, this finer part acquires a much more violent motion by this additional heat, and at length entirely breaks down all the fibres of the blood now preternaturally distended. And from this dissolution of the sanguineous fibres I judge the origin of the *pestilential spots* or eruptions should be derived; because, like the marks left by violent stripes on some fleshy part of the body, they are at first of a deep red, but soon after turn blue or black. Chap. 2.

32. (3.) Again, in such as are pretty apt to sweat, if the sweat be stopt too early, *viz.* before the morbid matter be totally expelled, the *buboes*, which began to rise kindly at the decline of the sweat, by thus wasting a part of the matter intended to fill them, either readily strike in, or at least never become true abscesses (as it usually happens in the *small pox*, when the patient has sweat copiously in the beginning) and the matter thereof being re-admitted into the blood, raises a violent motion therein, by which means the *pestilential spots*, which denote imminent death, are often driven out in the manner above described.

33. But, in order to shew more clearly how to prevent these and other inconveniences, I will faithfully set down all I have done and observed in this disease, beginning from the first appearance of the late *plague*.

34. At the beginning of *May*, in the year 1665, I attended a lady, about one and twenty, of a sanguine constitution, who, besides the burning

An extraordinary case.

Sect. 2. burning fever, which began a little earlier, had frequent vomitings, and other febrile symptoms. I began the cure with bleeding, and next day, to guard against a looseness, directed a vomit, which operated pretty well: for, as I have already observed, a looseness usually comes in the declension of a fever, for want of giving a vomit, when it was indicated by the retchings in the beginning. Visiting her next morning, I found she had a looseness, which perplexed me much, having rarely met with this symptom for some years before. Hence I judged that this was no common fever, as the event also shewed, and consequently required to be treated in a different manner from that above mentioned, which I had hitherto constantly used with success. Upon this, a senior physician being joined with me in consultation, bleeding was repeated by our joint advice, which the age, constitution of the patient, and the violent ebullition of the blood, seemed to demand; moderate cooling cordials were also given, and glysters injected every other day. At the decline of the disease, we directed some of the stronger alexipharmics, because there arose very uncommon and irregular symptoms, which are generally esteemed signs of considerable malignity; but all these means availed nothing, and the patient died about the fourteenth day.

Thoughts
occasioned
thereby.

35. The singular nature of this fever set my head at work for some days afterwards; and at length recollecting, (1.) that the violent heat continued even after repeated bleeding; (2.) that the patient's cheeks were red; (3.) that some drops of blood distilled from her nose a little before her death; (4.) that her blood when
cold

cold resembled that taken away in a pleurisy; Chap. 2.
 (5.) that she had a cough, and dull pains in the *vital parts*, or breast; and (6.) that it was that season of the year, which includes the end of spring and beginning of summer, and which is less disposed to produce continued fevers; all these dividing, as it were spontaneously, at this time, and either becoming intermittents, or suddenly turning to pleurisies, and the like inflammatory disorders; and lastly, (7.) that pleurisies were very *epidemic* at the same time: having, I say, duly considered these particulars, I concluded that this fever, though it had not the pathognomonic or distinguished signs of a *pleurisy* or *peripneumony*, was symptomatic, and occasioned by an inflammation lurking near the *vital parts*, though it was unaccompanied with pain in the side, or great difficulty of breathing. In short, I came at length to this conclusion, that I ought to have followed the same method here that I had frequently used in a pleurisy with good success. And, indeed, it afterwards fully answered my expectations; for being called some little time after this to a man affected exactly in the same manner, I began and finished the cure by repeated bleeding, after the method already commended in the *pleurisy*. And about the end of *May*, and beginning of *June*, this fever being then very *epidemic*, I recovered numbers by the same means. From this time forwards that dreadful *plague* began to rage with great violence, which afterwards made such devastation, that in the space of seven days it destroyed as many thousand persons in this city only.

A new method of cure, the result.

Sect. 2.

36. Whether the fever under consideration deserves to be entitled a *plague*, I dare not positively affirm; but this I know by experience, that all who were then seized with the true *plague*, attended with all its peculiar concomitants, and for sometimes afterwards, in my neighbourhood, had the same train of symptoms both in the beginning and through the course of the disease. But when I was in danger from the near approach of the *plague* to the house wherein I lived, yielding at length to the sollicitations of my friends, I accompanied the vast numbers that quitted the city, and removed my family some miles distant from it: but I returned to town so very soon afterwards, and whilst the *plague* yet raged so violently, that on account of the scarcity of abler physicians, I could not avoid being called to assist the infected. And not long after I attended several persons in fevers, which to my great surprize I found were of the same kind and nature as those I had so successfully treated, before my departure: for which reason, trusting to my own experience for a better guide, and preferring it to all manner of trivial rules, I scrupled not to direct bleeding again.

The pestilential fever cured by copious bleeding.

Mischief of not taking away enough blood,

37. I continued this practice of plentiful bleeding, along with the use of a ptisan and the like cooling diet, in numbers with wonderful success; till at length it failed me in a few instances, through the obstinacy of the patient's friends, who were so unreasonably prejudiced against it, as not to let me take enough blood away, to the great detriment of the diseased, from whom, as the cure turned chiefly upon bleeding, either a sufficient quantity of blood,

or

or none at all, should have been taken away. Chap. 2.
Finding my endeavours so warmly opposed, I judged that the discovering another method of curing this disease would be of eminent service for the future.

38. I shall here relate an instance of the mischief I once innocently did, not by bleeding, but because I was hindered from taking away as much blood as I judged requisite.—I was called to a young man of a sanguine complexion, and robust constitution, who had been seized with a violent fever two days before, attended with vertiginous pains in the head, excessive vomiting, and other symptoms of the like kind; and finding upon inquiry that there was no sign of a swelling, I immediately directed a large quantity of blood to be taken away, the top whereof, when cold, resembled corrupt, pleuritic blood; and I also prescribed a ptisan, and cooling julaps and broths. In the afternoon bleeding was repeated in the same quantity, and again, in like manner, the next morning. Calling upon him in the evening I found him much better, nevertheless his friends mightily opposed farther bleeding, which yet I earnestly contended for, assuring them, that by bleeding him only once more he would be out of danger, but that if they continued to oppose it, bleeding had better have been wholly omitted, and the cure undertaken by sweat; adding, in short, that otherwise he would certainly die. The event confirmed my prognostic; for whilst we were disputing about the operation, we lost the opportunity of doing it, for purple spots appeared next day, and the remains of the peccant matter, which ought to have been entirely carried

Sect. 2. carried off, (as bleeding so frequently repeated left no room to expect an abscess) corrupting the whole mass of blood, and destroying the texture thereof by its extraordinary subtlety, the patient died in a few hours afterwards.

39. Having therefore frequently met with such perplexing obstacles, I solicitously bent my thoughts to discover, if possible, as effectual, and at the same time a less exceptionable method of curing this disease. And after frequent and long consideration of the matter I pitched upon the following, which has since proved always serviceable, and every way complete.

A safer method substituted in its place.

40. First, if a *swelling* has not yet appeared, I bleed moderately, according to the strength and constitution of the patient, after which a sweat is readily and expeditiously raised, which otherwise would not only be difficultly procured in some subjects, but there would also be danger of increasing the inflammation thereby, and thus driving out the purple spots. And the immediately succeeding sweat makes abundant amends for the considerable mischief, which the loss of blood, though in a small quantity, would otherwise occasion. After bleeding, which I direct to be done in bed, so soon as all things are in readiness to raise a sweat, I immediately order the patient to be covered over with clothes, and a piece of flannel to be applied to his forehead, which last expedient contributes more towards raising a sweat, than one would easily imagine. Then, if the patient does not vomit, *I administer these, or the like sudorifics* :*

Take

* *I administer these, and the like sudorifics, &c. Theriaca, and the like solid medicines, being offensive to the stomach, are*

Take of Venice treacle, half a dram; the electuary of the egg, a scruple; Gascoign's powder, twelve grains; cochineal, eight grains; saffron, four grains; and the juice of kermes, enough to make the whole into a bolus; to be taken every six hours, drinking after it six spoonfuls of the following julap.

Chap. 2.

A sudorific
bolus.

Take of the distilled water of carduus benedictus, and compound scordium water, of each three ounces; treacle water, two ounces; syrup of cloves, an ounce: mix them together for a julap.

A sudorific
julap.

41. But if there be a vomiting, as it frequently happens in the plague and pestilential fevers, I forbear sudorifics, till, by the weight of the clothes, and throwing part of the sheet over the face now and then to collect the steams, the sweat begins to appear. For it is well worth observing, that as soon as the rays of the morbid matter get to the circumference of the body, the looseness and vomiting, occasioned by their being turned back on the internal parts, and lodging in the stomach and intestines, immediately cease spontaneously; so that how excessive a vomiting soever had preceded, the medicines afterwards taken are well retained, and succeed to our wish in exciting sweat.

Sudorifics,
when to be
given.

are not the most proper sudorifics. I should rather commend an infusion in boiling water of Virginia snake root, or, in want of this, of some other warm aromatic, with the addition of about a fourth part of aqua theriacalis, and a proper quantity of syrup of lemons to sweeten it. From which, in illnesses of the same kind with the goal fever, which appears the nearest to the pestilence, I have seen very good effects. See Dr. Mead on the Plague, pag. 163.

Sect. 2.

42. I remember that being desired by an apothecary to visit his brother, who was dangerously ill of a *pestilential fever*, and mentioning the giving a sudorific, he said he had already given several strong ones without effect, the patient having thrown them up by vomit. To this I answered, that he might prepare one of the most nauseous of those that had been exhibited, and I would easily prevent his vomiting it up. The event verified my promise; for the patient having first sweated moderately, by the weight of the bed clothes only, kept down a large bolus of *Venice treacle*, which causing him to sweat plentifully, he recovered.

The sweat to be continued twenty-four hours.

43. But to resume my subject: I direct the sweat to be continued for twenty-four hours, by giving draughts of sage posset drink, or mace ale, between times, strictly cautioning against wiping off the sweat, and not allowing the patient's linen to be changed, however moist or foul it be, till twenty-four hours after the sweat is gone off: and this I recommend to be observed with particular care. For if the sweat vanishes in less time, the symptoms immediately return with their former violence, and the health of the patient is greatly endangered, which a longer continuance of the sweat would have quite secured.

Objections to it answered.

44. And, in reality, I wonder much at *Diemerbroeck* and others, when I consider upon how slight a pretext they are induced to stop the sweat, namely, to preserve the strength of the patient. For (1.) that the patient is stronger whilst the sweat flows than before, must have been observed by every one that is but slenderly acquainted with the treatment of this disease.

(2.) I shall not scruple to publish and defend Chap. 2.
 what practice and experience have taught me, with respect to this matter. Several, who by my advice were kept in a sweat for twenty-four hours, have been so far from complaining of greater weakness from thence, that they have declared that in the same proportion the superfluous humour was thus carried off, they perceived their strength increase. And towards the latter part of the time I have often observed with surprise, that there appeared a more natural, genuine, and copious sweat than the former occasioned by the sudorific, and which gave greater relief, as if it were truly *critical*, and terminated the disease. (3.) Again, I do not see what inconvenience would attend refreshing the patient with restorative broths and liquids, when the sweat is at the height, and then the objection of want of strength to bear long sweats, vanishes. If, therefore, a faintness be perceived towards the end, I allow the patient to sup a little chicken broth, the yolk of an egg, or the like, which, together with the cordials and draughts, usually directed to keep up the sweat, sufficiently support the strength. But in a matter of fact so evident, it is needless to use many arguments; for what clearly shews the advantages of this method is, that whilst the patient continues to sweat, he judges himself in a fair way of recovery, and in the opinion of the attendants seems in no farther danger; but as soon as the sweat ceases, and the body begins to dry, he grows worse, a kind of relapse being thereby occasioned.

45. For twenty four hours after the sweat is gone off, I advise the patient to be cautious of catching ^{What is to be done after the sweat is gone off.}

Sect. 1. catching cold, to let his linen dry on his body, take all his liquids warm, and also to continue the use of the sage posset drink. Next morning I give the common purge, made of an infusion of *tamarinds, the leaves of senna, rhubarb, with manna and solutive syrup of roses dissolved in the strained liquor.* And by this method I recovered several persons,* who were seized with a *pestilential fever*

* And by this method I recovered several persons, &c. The intentions of cure in the *plague*, as delivered by *Hoffman*, are, (1.) to assist nature in promoting the discharge of the poison received, by the proper outlets, and chiefly by those critical tumours whereby it is generally expelled; and (2.) to keep up the strength and spirits, and remove the urgent symptoms. He advises to be sparing in the use of remedies, observing that few are best: and judiciously cautions against heating medicines, or alexipharmics, as they are commonly entitled, which increase the anxiety and heat, promote the dissolution of the juices, and force the *pestilential miasm* from the first passages into the blood, and upon the nervous parts: of this kind are all volatile, urinous, and oleous spirits, and volatile salts. Mixtures with acids are given with great advantage and safety. Opiates generally prove detrimental, but mild cordials do service. An emetic is very proper to be given, as soon as a sickness at stomach is perceived along with a *cardialgia*; and being immediately followed by a sudorific, has been found to remedy the disease in the beginning. *Nitre* is excellent in full habits, bilious, or sanguine constitutions, and where the heat is considerable, the fever violent, and accompanied with thirst, and pain in the head. But where there is a drowsiness, low pulse, coldness of the extremities, and great terror has preceded, nitrous medicines should be refrained. It is always safer to mix *nitre* with *camphire*, whereby the vaporous nature of the *camphire*, and the cooling one of the *nitre* are admirably corrected, and a medicine obtained, that is not only alexipharmic, but effectually checks an inflammation. Laxative are extremely hurtful in the beginning of the disease, but excellent in the declension. The extremes of heat and cold are equally to be avoided in the course of the cure.

Buboes,

fever the year after the plague, and did not lose a single patient after I began to use it. Chap. 2.

46. But

Buboes, if they appear late, should be promoted by drawing applications, cupping glasses, and even blisters. When they appear, their suppuration is to be promoted by digestive cataplasms, prepared of *figs, the roots of white lilies, roasted onions, linseed meal, honey and saffron*; or by ripening plaisters applied thereto, such as *diachylon with the gums, melilot, or mucilage plaister*. After suppuration they are to be opened and cleansed, and incarned with balsam of *Arcaeus*, mixt sometimes with *basilicon*; allowing time for the *sanies* to be discharged, and not healing them up too hastily. The cure of *carbuncles* is to be attempted by anointing their edges by digestive liniment, and covering them with cataplasms made of *roasted garlick, pigeons dung, Venice treacle, and oil of turpentine*; and when the eschar, or scab, falls off, anointing the place with *Egyptian ointment*, or the like. But if there be a gangrenous corruption, and it seems to spread, the part affected must be scarified, and a liquor applied thereto, which powerfully checks inflammation and corruption; such as the following, the good effects whereof I have frequently experienced:

Take of rectified spirit of wine, four ounces; camphire, two drams; saffron, and artificial nitre, each a dram: let them infuse together.

Artificial nitre is made of spirit of sal ammoniac and spirit of nitre, and perfectly dissolves in spirits of wine.

If these means fail, have recourse to the actual cautery, and afterwards, to soften the eschar, anoint with fresh butter.

By way of prevention, the safest and likeliest means to be used are, (1.) to quit the infected place; (2.) to avoid whatever weakens the body, checks perspiration, and breeds crudities in the first passages; as excessive bodily labour, too intense application of mind, sitting up late, warm bathing, all copious evacuations, overloading the stomach, &c. (3.) if the body be full of foul humours, to correct their vitiated quality, by temperate balsamics mixed with acids, taken in a moderate dose, and not too frequently; (4.) to drink generous liquors at proper times in moderation, and especially rhenish wine, which, on account of its gentle acidity,

Sect. 2.

Bleeding,
how practi-
cable with
safety.

46. But where a swelling has appeared, I have hitherto forbore bleeding, even in such as are not very apt to sweat, apprehending the sudden death of the patient might prevent the intended sweat, from a return of the morbid matter into emptied vessels. Yet bleeding might perhaps

dity, is esteemed excellent against putrefaction; and lastly, (5.) to guard against violent passions, endeavouring to preserve a constant firmness of mind, and shaking off all timorousness and dejection.—Thus far the excellent *Hoffman*. To which we shall subjoin that of Dr. Cullen—In order to moderate the violence of re-action, he recommends the antiphlogistic method; though bleeding, he observes, may be proper in some cases, for the most part it is unnecessary, and in many cases hurtful; and purging may be useful in drawing off the bile and other putrescent matters frequently present in the intestines; still large evacuations this way may be certainly hurtful. For the same purpose he also advises the use of *diluents, neutral salts, sudorifics, and emetics, blistering, and warm bathing*. The giving an emetic at the very first approach of the disease, he adds, would probably be of great service; and it is likely, that at some other period of the disease emetics might be useful, both by evacuating bile abundant in the alimentary canal, and by taking off the spasm of the extreme vessels. After the exhibition of the first vomit the body should be disposed to sweat, which should be raised to a moderate degree only, but continued twenty-four hours or longer, if the patient can bear it; excited and continued by the means laid down in a former note.

But if notwithstanding the use of sudorifics and emetics the disease should continue, the cure must depend upon the employment of remedies for obviating debility and putrescency; and for this purpose various tonics may be administered; but the best and most efficacious are cold drink, and Peruvian bark: respecting the management of carbuncles and buboes, though some attention is due to that point, he leaves that to the province of surgery. (See Cullen's *Practice of Physic*. vol. ii. pag. 216. §. 687, &c.)—Yet it has been observed, that acrid and caustic applications applied to the buboes, and opening them by incision, did not answer; these swellings did best when entirely left to nature, or healed only with emollients. *W.*

be used safely enough, provided a sweat were raised immediately afterwards, which being continued for the space above mentioned, may disperse and waste the whole mass of the humour by degrees, and with much less danger than would attend the waiting a long time for a kindly suppuration of the imposthume, which is very uncertain in so violent a disease. Chap. 2.

47. To conclude; wherever it shall appear to the reader that I am mistaken in point of theory, I ask his pardon; but with respect to practice I declare that I have faithfully set down all particulars, and have no where proposed any thing which I have not thoroughly experienced: and, in truth, when I come to die, I trust I shall have the satisfaction of being inwardly assured, that I have not only endeavoured, with the utmost diligence and integrity, to recover the health of all those who have been my patients, of whatever rank or condition they were, none of whom have been otherwise treated by me, than I desire to be, if I should be seized with the same distempers; but also that I have contributed to the utmost of my abilities, that the cure of diseases might, if possible, be prosecuted with greater certainty after my disease; being of opinion, that any accession to this kind of knowledge, though it should teach nothing more pompous than the cure of the tooth-ach, or corns, is of much greater value than all the vain parade of refinements in theory, and a knowledge of trifles, which are perhaps of as little service to a physician in removing diseases, as skill in musick is to an architect in building.

48. In the last place, I shall subjoin a short note, lest, perhaps, my opinion of *Nature* be taken

The term
Nature explained.

Sect. 2. taken in a wrong sense, or at least not sufficiently understood. In the foregoing discourse I have frequently made use of the term *Nature*, and ascribed various effects to her, as if I would thereby represent some one self-existing being, but every where diffused throughout the machine of the universe, which, being endowed with reason, governs and directs all bodies, such a one as some philosophers seem to have conceived the *soul* of the *world* to be: but as I neither affect novelty in my sentiments or expressions, I have made use of this antient word in these pages, if I mistake not, in a qualified sense only, and as it is understood and applied by judicious persons; for by *Nature* I always mean * “ a certain

* *For by Nature, I always mean, &c.* Notwithstanding the great variety of definitions which have been given of this term, I have not yet met with one sufficiently satisfactory to merit the full adoption; they all lie open to such strong objections.—HIPPOCRATES calls nature “ the aggregate of all things that concur to perfect health;” and VAN SWIETEN, copying after him, says, “ It is nothing more than the aggregate of all those physical and natural conditions, which are required to make life most regular, and durable, and mobility most active; but this is perfect health: if any thing is wanting nature is deficient, and that defect is disease.”

HOFFMAN briefly defines it, “ a word used to signify the structure, mechanism, and contrivance of the body, acting with certain powers according to certain necessary and mechanical laws assigned it by its Maker.”

VAN HELMONT asserts, “ that nature is a command of God, and performs what she is commanded.”

MEAD considers it as some incorporeal power acting upon the different parts of the machine—which power he concludes to be the mind; for, says he, “ those very motions which are generally called natural and vital, as those of the heart, lungs, and intestines, which persevere through the whole course of life, even when the will cannot be

“ con-

tain assemblage of natural causes, which, Chap. 2.
though destitute of reason and contrivance, }
are directed in the wisest manner, whilst they
“ perform

concerned in them; as they have their beginning from the
mind, so they are perpetually under its direction.”

The three former consider the different properties of various parts of the human machine united and regularly conducted as nature; whilst the two latter conclude, that something acting upon the various parts, and putting, and keeping them in action, as more properly and more fully descriptive of the term.

Now as we are certain, that there is some power by which the body is enabled to exist; that *that* power depends upon the regular motions of the solids and fluids; that as matter, of which they consist, cannot move by itself, and without that motion life would terminate, the continuation of which motion we attribute to nature; it is clear that something must be understood by that term more than the united properties of the component parts of the machine.—HELMONT calls in the *Jussum Dei*—the *Jussum Dei* then may be disease, according to his definition, which we cannot admit; disease we think something inferior.—Nor can we consider it, according to MEAD, to be the mind; for if all communication be cut off between the mind and any part of the body, that part cannot be said to act by its influence: but the heart taken out of the body will exercise its systolic and diastolic motion for a considerable time under proper situations.—From hence, then, it is clear, that the human body is neither more nor less than an instrument upon which nature performs her various operations for the purposes for which the machine was created, and that disease is nothing but a defect, or imperfection in that instrument, occasioned by some material or mental cause inherent, or accidental, and not a deficiency of nature; which universally considered we take to be an agent of Divine Providence, endowed with limited powers, which she exercises for the formation of bodies, and other particular purposes, in order to promote the ends for which they were ordained; that she cannot transgress those bounds; that in herself she is ever perfect, and when any imperfections happen in bodies, in the animal, vegetable, or mineral kingdoms, they are owing to some circumstances in which those bodies are placed, or with which they are connected, and not to any defect in nature.

Sect. 2. “ perform their operations, and produce their effects :” Or, in other words, that Supreme Being, by whose power all things are created and preserved, disposes them all in such manner, by his infinite wisdom, that they proceed to their appointed functions with a certain regularity and order, performing nothing in vain, but only what is best and fittest for the whole frame of the universe, and their own peculiar nature ; and so are moved like machines, not by any skill of their own, but by that of the artist.

This is nature considered in its most general sense ; but when we apply the term to particular bodies, something else seems necessarily included in the definitions respecting, and peculiar to those bodies.—Thus then applied to the human machine, we would say ; that nature is the powers, inherent in the system, put into, and continued in action, by the force of the living, or vital principle ; and when disease occurs it is owing to some circumstances happening to the solids or fluids of the human machine, or to some situation into which they are thrown, from whence they cannot perfectly exercise those powers, or feel the impulses of the vital principle, and not to any defect or imperfection in those powers, or principles. We shall offer one instance in proof.—A man walking in apparent health shall, from the bursting of some large blood vessel, drop dead instantaneously ; here appears no previous defect of the constitutional powers, or the vital principle, their action only ceases in consequence of the vascular rupture ; because the circulation of the blood, for want of vascular continuation, is destroyed by this accident ; the defect then lies in the instrument in which these inherent powers reside, and on which this principle asserts its action, and not in the powers or principle themselves—and this will apply to every other species of disease. *W.*

SECTION III. CHAP. I.

Chap. I.

*The epidemic Constitution of the Years 1667, 1668,
and part of 1669, at London.*

1. **I**N the year 1667, at the approach of the The progress of the small pox of this constitution. *vernal equinox*, the *small pox*, which, during the immediately preceding *pestilential constitution*, appeared very rarely, or not at all, began to shew itself, and spreading more and more every day, became *epidemic* about *autumn*; after which, its violence being abated by degrees, upon the coming on of the *winter*, it decreased, but returned again the following *spring*, and prevailed, till it was checked, as before, by the subsequent *winter*. It afterwards increased a third time with the approaching *spring*, but did not then rage so severely, nor so generally, as it had done the two foregoing *summers*: and in *August* 1669, it totally disappeared, and was succeeded by an *epidemic dysentery*. The *small pox* was more general in town for the first two years of this constitution, than I ever remembered it to have been, either before or since; and nevertheless, as it was at that time the genuine and a kindly sort, it de- A good kind. stroyed few in comparison of the multitudes that were seized with it.

2. At the same time the *small pox* first appeared, there arose a new kind of *fever*, not much A new fever arose at the same time, unlike it, except in the eruption of the pustules, and the symptoms thereon depending; of which I shall treat particularly in the following pages. This *fever*, though it affected fewer persons by far than the *small pox*, did notwithstanding last as

Sect. 3. long; but in the *winter*, when that abated, this prevailed, and when the *small pox* returned again in the *spring*, the *fever* went off, so as thus to leave the *small pox* the *predominant epidemic* of this constitution; the *fever* notwithstanding never manifestly ceased during this space, till at length it totally disappeared, together with the *small pox*, in *August* 1669.

And a looseness.

3. These two *epidemic* diseases were accompanied by a third, especially the last *summer*, wherein this constitution prevailed, *viz.* a *looseness*, the constitution of the air then inclining to the subsequent *dysentery*. But however this be, at least it appeared that this disease so nearly resembled the then reigning *fever*, that it should seem to be only the *fever* turned inwards, and fixed upon the bowels.

4. I shall treat of these three disorders separately, which may justly be called the sole *epidemics* of this constitution. I begin with the *small pox*, of which I shall discourse more at large, because the kind that prevailed during this term of years seemed to me to be more particularly *genuine* and *regular* than any other, inasmuch as it exhibited the same phenomena, and was every where attended with the same train of symptoms in all that were seized with it; from which, therefore, as being the most perfect in its kind, a true history of this disease, and the method of cure are to be taken.

Every constitution attended with its peculiar fever and small pox.

5. For it must be observed, that every particular constitution of years has not only a proper and peculiar *fever* belonging thereto, but also a peculiar kind of *small pox*, which resembles this species for this course of years, but a different one in the following years, though they may seem

seem to resemble each other as to certain appearances which are common to all the kinds: so much does nature vary in the production of epidemic diseases. Chap. 2.

6. But to resume the subject, I will first, give the history of this kind, of the *small pox*; which I therefore call the regular kind, to distinguish it from the irregular kinds of the following years; and I will also subjoin the method of cure, which was attended with all desirable success.

C H A P. II.

Of the regular Small Pox * of the Years 1667, 1668, and Part of the Year 1669.

1. **T**HE *small pox* in those years it is *epidemic*, when it is also mild and *regular*, usually begins about the *vernal equinox*, as did that now under consideration; but in those years wherein

* *Of the regular small pox, &c.* Dr. Cullen arranges this disease under his class PYREXIÆ, and order EXANTHEMATA, and defines it,

A contagious inflammatory fever, attended with vomiting and pain upon pressure on the epigastrium. An eruption of inflammatory papulæ begins on the third, and ceases on the fifth day, which in the space of eight days suppurate, and form scales, leaving afterwards in the skin cicatrices depressed, or pits.

This he divides into two species; the first of which takes in this of our author, here to be treated of, and which he calls,

VARIOLA DISCRETA, and thus defines it,

The distinct small pox, attended with pustules few in number, distinct, circular in their circumference, and turgid; the fever ceasing immediately when the eruption is completed.—*Synopsis Nosologiæ methodicæ*, vol. ii. pag. 131.

With respect to the second, or confluent species, for the definition and arrangement, see *anomalous small pox of the years 1674, 1675, note the first.*

Sect. 3. it is not only *epidemic*, but likewise *irregular*, and of a more dangerous kind, it sometimes appears sooner, *viz. in the month of January*,* seizing whole families, and sparing none, of what age soever they be, unless such as have already had it, not even suffering those to escape who have been afflicted *with the bastard kind*,† which are no way a-kin to this disease. There are two kinds of this *small pox*, as well as of that which happens *in all years*, the *distinct* and *confluent*, which, though they differ not essentially, as some phrase it, are yet easily distinguished by some remarkable symptoms peculiar to each kind.

* *In the month of January, &c.* BOERHAAVE observes, that if the *small pox* arises in a place where it has not appeared for six years past, either towards the end of *January* or in *February*, the following summer will be attended with a dangerous kind; but it may be easily cured in the beginning. Hence great attention must be had here to the nature of the disease, and the particular treatment it demands, &c. so that in the summer, when it will be of an extremely bad kind, we may be prepared to give such medicines as agree best with this *epidemic* species; though it then generally proves mortal. But if the *small pox* appears in *May*, it will be gentle, and of a favourable and healthful kind.— See *Prax. Med.* vol. v. p. 299.

† *With the bastard kind, &c.* SYDENHAM has not particularly specified what he means by this term; it was probably the chicken pox, which is attended with an inflammatory fever, and has pustules breaking out something like the *small pox*, but scarcely matured, dry away in a few days, and leave no marks behind them.—Boerhaave has supposed that the *small pox* may attack the same person twice; for says he, “if a person has had the *distinct* kind; he yet may have the *confluent* one:”—I cannot think so; for the matter producing both one and the other of these species is similar, and the difference of the appearance arises more from some constitutional or accidental circumstances, than any difference in the morbid miasmata, as the practice of inoculation sufficiently evinces. W.

2. (1.) The *distinct* kind begins (1.) with a Chap. 2.
 chilness and shivering, immediately followed by Leading
 (2.) extreme heat, (3.) violent pain in the head symptoms in
 and back, (4.) vomiting, (5.) and in grown the *distinct*
 persons a great tendency to sweat; for I never kind.
 observed such a disposition in children, either
 before or after the eruption; (6.) pain in the
 parts immediately below the *scrobiculus cordis*, if
 they be pressed with the hand; (7.) sleepiness
 and *stupor*, especially in children, and some-
 times convulsions, which happening after den-
 tition is over, I always suspect the *small pox* to
 be just approaching, and the eruption appear-
 ing in a few hours afterwards generally verify
 the prognostic: so that, for instance, if a child
 be seized with a convulsive fit over night, as it
 usually happens, the *small pox* comes out next
 morning; and I have frequently observed, that
 the *small pox* immediately succeeding such fits
 throws out large eruptions, is of a mild and fa-
 vourable kind, and seldom proves confluent.
 And these are almost all the symptoms that ac-
 company this disease in the beginning, and ge-
 nerally precede the eruption of the pustules.—
 But it may be proper to observe here, that
 where the blood is of a looser texture, and so
 easily admits of a change, it sometimes happens
 that the *separation* is performed by degrees with-
 out any considerable sickness, before the expul-
 sion of the matter shews itself by the eruption
 of the pustules.

3. The *distinct small pox* comes out mostly on Time and
 the fourth day inclusive from the beginning of manner of
 the illness, and sometimes a little later, but very the eruption.
 seldom sooner; at which time the symptoms are
 usually much abated, or even go quite off, so
 that the patient thinks himself pretty well; but
 grown

Sect. 3. grown persons are so inclined to sweat, that it can hardly be prevented, however thinly they are covered; and this disposition continues till the pustules begin to ripen, and then vanishes spontaneously. The eruption proceeds nearly in the following manner; pale red pustules, as large as the head of a small pin, shew themselves here and there on the face first, or on the neck and breast, and afterwards on the whole body. During this stage of the disease, the throat is affected with a soreness that increases as the pustules rise, which growing every day fuller and plumper, enflame the skin and flesh of the neighbouring parts.

Beginning
and progress
of the sup-
puration.

4. For *about the eighth day* from the beginning of the disease, which is a time I always take particular notice of here, the spaces between the pustules, that appeared before of a pale white, begin to grow red, and swell in proportion to the number of pustules, with a throbbing pain of those parts, which continually increasing occasions the inflammation and swelling above mentioned, so that in the progress of the disease the eyelids are so filled and distended, as sometimes to make the patient blind, and this tumour looks like a shining inflated bladder drawn over them. The blindness comes on sooner, if a great number of pustules fix on the eyes at the beginning of the eruption; immediately after the face, the hands and fingers swell in proportion to the number of eruptions. The pustules on the face, that till this day were smooth and red, now grow rough and whitish, which indeed is the first sign of a beginning suppuration, and they likewise gradually discharge a yellow matter, in colour resembling

bling a honeycomb. The inflammation of the hands and face being in the mean time come to its height, causes the spaces between the eruptions to look of a pretty florid colour, not unlike a damask rose; and in reality, the more mild and genuine the *small pox* is, so much more the eruptions and their intermediate spaces approach this colour. As the pustules in the face appear rougher and yellower every day as they ripen, so, on the contrary, those of the hands and other parts appear smoother and not so white.

Chap. 2.

5. On the eleventh day the swelling and inflammation manifestly abate, and the eruptions both of the face and the rest of the body, being come to their maturity and just bigness, (which in these years equalled that of a large pea) dry and scale off; and in this kind of *small pox* they usually quite disappear on the fourteenth or fifteenth day: but the eruptions of the hands being generally more obstinate than those of the other parts, and yet fresh and white, remain a day or two after the rest, and those of the face and body scale off; but these burst, and so vanish. The pustules of the face are succeeded by a scurf, or branny scales, and these sometimes by pits or pock-marks; for when the pustules first fall off, the skin looks smooth, but these scales coming on and falling off alternately, do at length make those pits that frequently continue visible long after the recovery of the patient in this disease; though the *distinct small pox* very rarely leaves any marks behind it. It was chiefly that kind that raged the last six months of the year, that pitted, for those which preceded made no marks, unless it proved the *confluent*

The pustules
begin to dry
on the 11th
day.

Sect. 3. *fluent* sort, as we shall hereafter remark. The patient was either quite costive, or had few stools throughout the whole course of the distemper. And let this suffice for the *distinct small pox*.

The confluent small pox described.

(6.) (2.) That kind of the *small pox* which we call the *confluent*, is attended with the same symptoms in common as the *distinct*, only they are all more violent; *the fever, anxiety, sickness,** and vomiting, &c. being more severe, by which signs a skilful physician discovers it to be the *confluent* kind, even before the eruption: nevertheless, the patient is not so ready to sweat in this kind as in the other just described, where the great tendency thereto generally foreshews that the *small pox*, which will soon appear, will not run together. Moreover, a *looseness* sometimes precedes, and continues a day or two after the eruption; which I have not hitherto met with in the *distinct small pox*.

The pustules generally come out on the 3d day.

7. *This kind of small pox* † generally comes out on the *third day*; sometimes earlier, but scarce

* *The fever, anxiety, &c.* To which may be added, the pulse is more frequent, and more contracted, approaching to that state of the pulse which is found in the typhus; the coma is more considerable, and there is frequently a delirium. In very young infants, epileptic fits are sometimes frequent on the first days of the disease, and sometimes prove fatal before any eruption appears, or they usher in a very confluent and putrid small pox.—Cullen's *Practise of Physic*, vol. ii. pag. 132. sect. 590. *W*.

† *This kind of small pox, &c.* Most practitioners observe, that the slower the small pox comes out, the milder they prove, and the better they ripen: those appearing on the first day of the illness are esteemed the worst kind; those on the second, milder; those on the third, still more gentle; and on the fourth, the most favourable.—Boerhaave, *Prax. Med.* vol. v. pag. 302.

ever

ever later, whereas the *distinct* appears on the Chap. 2.
fourth day inclusive from the beginning of the
 distemper, or later, but very rarely before, and
 the sooner the pustules come out before the
 fourth day, the more they run together. How-
 ever, though to speak in general, the *confluent*
 kind scarce ever appears so late as the fourth
 day, yet sometimes the eruption may be defer-
 red by some violent symptom to the fourth or
 fifth day; *e. gr.* (1.) sometimes a sharp pain in
 the loins, resembling a fit of the stone; (2.)
 sometimes in the side, like a pleurisy; (3.)
 sometimes in the limbs, as in the rheumatism;
 or lastly, (4.) in the stomach, attended with great
 sickness and vomiting. In these cases, which
 however are not common, I have observed the
 small pox to come out later than ordinary, as
 being retarded by the extreme violence of the
 symptoms above enumerated; which, indeed,
 being more severe than usual, when they arise
 in the very beginning, manifestly indicate that
 the subsequent small pox will be of the *confluent*
 kind, and not void of danger.

8. I proceed next to remark, that though
 the symptoms accompanying this disease in the
 beginning, in the *distinct* kind, go off, as I said
 above, immediately after the eruption, it ne-
 vertheless happens much otherwise in the *con-*
fluent kind; the fever and other symptoms af-
 flicting the patient for several days after the
 pustules appear.

9. Sometimes this sort comes out like an
erysipelas, and sometimes like the *measles*; from
 which they cannot be distinguished, at least as to
 the outward appearance, unless by a physician
 well acquainted with these diseases. But who-
 ever

Sometimes
 they come
 out like an
erysipelas, or
 the *measles*.

Sect. 3. ever carefully attends to the different time of the eruption in these diseases, and other circumstances, which, from the history of each, will be found to differ extremely, will readily distinguish them. As the distemper increases, the pustules, especially those of the face, do not rise so high as in the *distinct* kind; but *running together*, appear at first like a red bladder, *covering the whole face*,* and making it to swell sooner than in the *distinct* sort, and at last they appear like a thin white pellicule, closely adhering to the face, and rising little higher than the surface of the skin.

Begin to dry
after the 8th
day.

10. After the *eighth day* this pellicule grows every day gradually rougher, as appears by the touch, and inclines to a *brown*, and not to a *yellow* colour, as in the *distinct* kind. The roughness and colour of the skin daily increase, till at length the pellicule falls off in large scales; but when the disease has been very severe, it usually sticks to some parts of the face till after the twentieth day. The more violent the *small pox* proves, the nearer the eruptions, as they ripen, incline to a dark brown colour, and the longer they are in falling off, if left to themselves; whereas contrariwise, the less they run together, the yellower they grow, and the sooner they scale off. When this pellicule or scab, which covers the face, first falls off, it leaves no roughness behind, but is immediately succeeded by

* *But running together, cover the whole face, &c.* On the other parts of the body the pustules of the confluent small pox are more distinct than upon the face, but never acquire the same maturity and consistence of pus as in the properly distinct kind.—Cullen's *Practice of Physic*, vol. ii. pag. 132. sect. 592. *W.*

branny scales of a very corrosive nature, which Chap. 2.
 not only make larger pits than the *distinct* kind
 generally do, but also much disfigure the face
 with unseemly scars: and in the *confluent* kind,
 if the disease has been very violent, the skin of
 the shoulders and back sometimes scales off,
 leaving these parts bare.

11. It must be observed, that this disease is Whence the danger in this disease.
 not to be esteemed *dangerous*, because the body is
full of pustules,* but from the great number of
 them in the face; for if that be exceeding full,
 though they are but few, and those of the *distinct*
 kind every where else, yet the patient is equally
 endangered, as if all the limbs were extremely
 full: but on the contrary, though every part
 beside be very full, if there be but few in the
 face, the danger is less. What has been said
 of the number of the eruptions, may also be
 affirmed of the kind, for the face plainly shews
 whether it be mild or severe.

12. I have always observed in the *confluent* The pustules largest in the hands and feet.
small pox, that the eruptions in the hands and
 feet were larger than those of the other parts,
 and were gradually less and less the nearer they
 approached the body. And these are the obser-
 vations on the eruptions, which I thought pro-
 per to premise.

* *Dangerous, because the body is full of pustules, &c.* It
 is on this account that bathing the feet in warm water, and
 keeping them afterwards warm, is adviseable, in order to
 drive the flux of humours to the lower extremities, that
 fewer eruptions may occupy the face; for it is observed,
 wherever the parts of the body are kept in a state of warmth
 more than common, there the eruption is apt to break out
 most copiously. *W.*

Sect. 3.

A salivation
and a loose-
ness attend
this kind.

13. The *confluent small pox* is attended with two other symptoms not less considerable than the eruptions, the swelling, or any one of those above mentioned, *viz.* (1.) a *salivation* or *spitting* in grown persons, and (2.) a *looseness* in children. The former is so constant an attendant on this disease in grown persons, that I never met but with one patient in this kind who was free from it; but the latter, namely the looseness, does not so certainly affect children. Whether provident nature has therefore substituted these evacuations, because in this small and flat sort the morbid matter cannot be so entirely discharged as by the larger and higher eruptions in the *distinct* kind, is what I do not pretend to determine; for I only write a history, and do not undertake to solve difficulties. This, however, I certainly know, that these symptoms not only generally accompany the *confluent small pox*, but that the evacuation made thereby is as necessary as either the eruptions, or the swelling of the face and hands.

When the
salivation
begins and
ends.

14. The *spitting* sometimes begins as soon as the eruptions appear, and sometimes not till a day or two after. The matter is for some time thin, and easily and plentifully expectorated; and, indeed, this salivation is not much unlike that raised by *mercury*, only the *saliva* here does not smell so disagreeably. But towards the *eleventh* day, the *saliva*, now become more viscous, is raised with great difficulty; the patient is thirsty, coughs often whilst he drinks, and the liquor flies out at the nostrils; and from this day the salivation generally stops, though sometimes, but very rarely, after it has ceased entirely for a day or two, it returns again. On the same day

the swelling of the face and the spitting begin to abate, but then, instead of them, the hands commonly swell, or, at least, ought to do so. Chap. 2.

15. A looseness does not seize children so soon as a salivation does grown persons; but whenever it begins, unless it be stopped by art, it attends the distemper throughout.

16. In both kinds of the *small pox the fever rages most* * from the beginning to the time of the eruption, after which it abates, and continues much more moderate till the suppuration begins; which being finished it goes off entirely. The fever, when highest.

17. I have always observed when the disease proved very violent, that the patient had a kind of fit towards evening, at which time, especially, the more dangerous symptoms arose, and raged most severely.

18. Having now given an accurate history of this kind of *small pox*, including its true and genuine symptoms, rise, and progress, as it naturally appears, I proceed next to treat of the *irregular symptoms*, which happen in this disease, when it is unskilfully treated.

19. It is to be noted therefore, that the irregular symptoms happening on the *eighth* day, in the *distinct* kind, and on the *eleventh* in the *confluent* (always calculating from the first beginning of the distemper) do most eminently concern the life or death of the patient, and ought The 8th day in the distinct most dangerous.

* *The fever rages most, &c.* In the confluent small pox, the fever which had only suffered a remission from the time of eruption to that of maturation, is often at, or immediately after, this period, renewed with considerable violence. This is what is called the SECONDARY FEVER, and is, in different cases, of various duration and event.—Cullen's *Practice of Physic*, vol. ii. pag: 137, sect. 192. *W.*

Sect. 3. therefore to be thoroughly considered; it being apparent, that most of those who perish by either kind, die on the above-mentioned days in each.

The hot regimen, where improper.

20. For first in the *distinct* kind, if the patient sweats pretty freely, which, as we remarked above, usually happens in grown persons, he conceives all will go well, hoping the venom or malignity of the disease will by this means be expelled through the pores of the skin, and therefore thinks it right to promote the sweat by cordials and a hot regimen; and he pursues this method the more willingly, both because he seemed to have been relieved thereby in the beginning, and likewise because it agrees better with the ill-grounded opinion of the attendants. But those particles being at length expelled by sweat, which should have served to raise the pustules, and swell the face, on the *eighth* day, the face, which ought to swell and be inflamed in the intermediate spaces, contrariwise appears flaccid; and those spaces white, or pale, whilst the pustules look red, and continue elevated even after the death of the patient. And the sweat, which had flowed freely to this day, now ceases suddenly and spontaneously, and cannot be raised again even by the warmest cordials. Mean time the patient is seized with a delirium, great restlessness and sickness, a frequency of making urine in small quantities, and dies in a few hours, contrary to expectation. But it must here be observed, that if the eruptions be few, the disease happens in the winter, and in a person in years, or if bleeding has been used, this hot regimen, of which we have just treated, does not then so certainly hinder the swelling of the face, and is not

The mortal symptoms thence occasioned.

so fatal, as where the eruptions are many, or the disease happens in the spring or summer season, and the patient is in the prime of life, and no blood has been taken away. Chap. 2.

21. But in the *confluent* kind there is most danger, and the greatest number die on the *eleventh* day; for as the spitting, which had hitherto preserved the patient, commonly ceases spontaneously about this time, unless the swelling of the face keeps up a little longer, and that of the hands, now manifestly beginning, supplies its place, death must needs ensue. For it must be considered, that in this time of *small pox*, where the eruptions are so small, not only the salivation, but also the swelling of the face and hands, is absolutely requisite in order to a proper discharge of the morbid matter; and if either be wanting, or goes off too soon, the patient must perish immediately. But it happens too frequently in this hot distemper, that the texture of the blood is so much weakened and broken, and so highly inflamed by an over-hot regimen, as to be no longer able to perform the expulsion of the inflammatory particles in a slow and gradual manner (not to mention how the mischiefs proceeding from forcing sweat improperly) whence either the face and hands do not swell at all, or the swelling vanishes with the salivation; for though the swelling of the face ought to abate a little on this day, yet it should not go off entirely till a day or two after, the swelling of the hands in the mean while continuing and increasing, which is one of the most certain signs of recovery, as the contrary is of imminent danger.

22. However this be, the *saliva*, which till this day continued crude and thin, and was easily Whence the danger.

Sect. 3. expectorated, now becomes so viscid and tough as to endanger suffocation, and when the patient drinks, the liquor falls down the windpipe, whence it is thrown up through the nostrils with a violent cough. He is seized with a hoarseness, a great *stupor* and drowsiness, and being wholly oppressed by the violence of the disease, generally sinks under these symptoms on the above-mentioned day.

delirium,
how caused. 23. There are also other symptoms, which happen in any stage of the distemper, and which are equally common in the *distinct* and *confluent* kinds of small pox. For instance, a *delirium* sometimes seizes the patient, occasioned by the excessive ebullition of the blood, and the heat is so intolerable, that he endeavours in a furious manner to get loose from those that confine him in bed. Sometimes the same cause produces a very different or contrary effect, as it seems, namely, a kind of *coma*, so that the patient dozes almost always, unless he be constantly roused.

Whence a
coma, and
purple spots. 24. Sometimes also in this disease, as in the *plague*, the texture of the blood being loosened by the violence of the inflammation, purple spots appear in the spaces between the eruptions, which are generally forerunners of death. This happens oftener when the constitution of the air chiefly favours this epidemic disease. Sometimes small black spots, scarce so large as pins heads, and depressed in the middle, appear on the top of the eruption in different places; which, as they proceed from too much heat, do at length by the use of a cooler regimen acquire a brown, and afterwards by degrees a yellow colour, which naturally belongs to the genuine and regular
small

small pox. This is apparent to those who are acquainted with this disease, in which all the symptoms become proportionably milder, the nearer the eruptions, when come to suppuration, resemble this colour, and *vice versa*. Chap. 2.

25. *Again, the blood of young persons,** and such as are in the vigour of life, is sometimes so much inflamed in this disease, especially if too free an use of wine or any other spirituous liquor has preceded, as to break through the arteries into the bladder, and so occasion *bloody urine*, which is one of the most dangerous symptoms that appear throughout the course of this distemper. Whence
bloody urine.

26. Moreover, sometimes, but not so frequently, a spitting of *blood* proceeds from the same cause. But either of these hæmorrhages usually happen in the beginning, before the eruptions appear; or if they shew themselves in some places, yet in most others they lie concealed under the skin, in great abundance, and are of that A spitting of
blood owing
to the same
cause.

* *Again the blood of young persons, &c.* SYDENHAM considers this symptom as arising from the bursting of the arteries from the force of the blood; and hence a consequence of inflammatory diathesis, according to the present idea: but this, like all the other hæmorrhages which happen in this complaint, most commonly proceeds from the texture of the blood being broken by the putrescent acrimony; and from its thinness ouzing through the small mouths of the excretory vessels, or transfusing through the arterial coats into the different cavities. This is a distinction necessary to be made, as it will influence our modes of cure, which would be very different according to the existing cause. Besides, care should be taken to ascertain that the discoloration of the urine arises from blood; for, as Dr. Swan justly observes, red urine has been sometimes taken for bloody: in order, therefore, to prevent the mistake, we shall observe with him, that when the urine has stood to settle, if blood is mixed along with it, the red particles will congeal and fall to the bottom, leaving the urine clear above. *W.*

Sect. 3. kind which would prove most *confluent*, unless one of the above-mentioned symptoms should terminate the disease by destroying the patient.

When a stoppage of urine happens.

27. Sometimes, also, especially in young persons, there happens a total suppression of urine, either at the height, or declension of the *distinct* kind.

The symptoms from cold, copious bleeding, and over-purging.

28. There are likewise other symptoms that sometimes arise from a contrary cause to those above enumerated; namely, when the patient has been injured either (1.) by too intense cold, (2.) improper bleeding in a very large quantity, or (3.) over-purging; whence the eruptions sometimes suddenly sink, and a looseness comes on, which, in grown persons, as we have before observed, proves highly dangerous, the *variolous* matter being thereby struck in, so that nature is utterly unable to expel it in a proper manner by the pores. Besides, by this means the swelling of the face and hands is checked, which is to be esteemed as favourable a symptom as even the eruptions of the pustules, unless they be very few indeed.

The former rare.

29. But the symptoms occasioned by taking cold are very rare in comparison of those that arise from the hot regimen; for as this disease may with great reason be reckoned amongst those of the most inflammatory kind, a mistake on this hand happens much more frequently than on the other.

The disease and inflammation of the blood and juices.

30. *What the essence of this disease is,** I ingeniously

* *What the essence of this disease is, &c.* The same reason which prevents the attainment of knowledge relative to the plague, prevails also here, and we can only judge of it from its effects; and in this view it is considered as a contagion

nuously own I know not, by reason of a natural defect in the understanding common to me and all mankind; but upon a thorough consideration of the above-mentioned symptoms, it should seem to be an inflammation of the blood and juices, yet of a different kind from other inflammations, in removing which, nature, during the first two or three days, endeavours to concoct and digest the inflamed particles, which being afterwards thrown out on the surface of the body, she further ripens, and at length, totally expels in the form of small abscesses. Hence, in order to lay some foundation for the method of cure, regard must be had to two different stages of this disease; the first whereof is that of the *separation*, and the second that of the *expulsion*. Chap. 2.
Has two stages.

31. (1.) The *separation* is mostly accompanied with a febrile ebullition, and is ordinarily finished in *three* or *four* days, during which nature is employed in collecting the inflamed particles (1.) The separation.

tagion of a specific nature, producing always an eruptive fever, varying in its type according to the peculiar predisposition of the habit, or some accidental circumstances operating upon the constitution, and hence its varieties. For though some have thought that the difference of the disease depended upon the different nature of the contagious miasmata, we have every reason to think no real difference exists; for people inoculated with the same matter have been known, some to have the distinct, others the confluent species of the small pox. From hence it appears conclusive, that deviations in the contagious particles are not necessary to produce the different diseases; and that they only differ in point of appearances: and these chiefly consist in the “period of the eruption, in the number of pustules produced, in the form of the pustules, in the state of the matter contained in them, in the continuance of the fever, and, lastly, in the danger of the disease.”—Cullen. *W.*

Sect. 3. together that vitiate the blood, and expelling them to the fleshy parts, which being over, the former calm returns; the disturbance raised in the blood, whilst this was doing, being now quieted. The separation being thus finished by means of the ebullition of the blood, (2.) the *expulsion* succeeds next, which is performed, during the rest of the time the disease continues, by means of those small abscesses in the flesh. For as they differ not in their nature from other abscesses, so, like those, they usually run through the states of crudity, suppuration, and exsiccation, which, if they finish right, there is no danger, as the cure chiefly depends thereon; but if not, very sad symptoms will succeed. And, indeed, the expulsion requires so much longer time than the separation, because *this* is performed in a thin fluid body, and, as I may say, in the bosom of nature, whereas *that* is performed in a thick, dense substance, and at a greater distance from the fountain of life.

The indications.

32. These particles being premised, *the indications that arise are*; * (1.) that such an equable ebullition of the blood be maintained, that it may neither finish the separation too hastily, by rising too high, nor retard, or render it imperfect, by sinking too low; (2.) that the abscesses, or eruptions be very carefully kept up,

* *The indications of cure are, &c.* These will be according to the nature of the concomitant fever, for it is upon the proper management of that the success of our endeavours must arise; whether it be of an inflammatory nature, or has a tendency to the nervous or putrescent species. Inoculation has taught us the best modes of conducting ourselves in this disease, and the same treatment is necessary in the *small pox* arising from infection, as in that where the *vulgaris* matter has been thrown into the habit by art. *W.*

so that, running through their proper states, they may at length entirely discharge the matter they contain, and vanish. Chap. 2.

33. (1.) To treat therefore briefly of the first indication. Great caution is required, especially during the separation, *that the ebullition may not rise too high, either by heaping too many cloths on the patient, overheating the air, by keeping too large a fire in the room, or using heating medicines and cardiacs.** And these must be particularly guarded Method of answering the first indication.

* *That the ebullition may not rise too high, &c.* The world is infinitely obliged to our author for laying the foundation for the introduction of the cool regimen; and to Mead, Friend, and Jurin, for adopting this method, and by their unwearied endeavours in exploding the heat and method.—At present on the first attack of the *small pox*, where circumstances point out that the disturbance in the system arises from that cause, which may be known from the disease being epidemic and the person not having had the *small pox* before, being exposed to the infection, and seized with symptoms of fever, he is, as in inoculation, to be freely exposed to the cool air, to be purged, and to have cooling acids given liberally: if these fail in moderating the fever sufficiently, some blood may be taken from the patient, more especially if he be an adult, of a plethoric habit, and accustomed to full living; a vomit, under the same circumstances should be administered, as is useful in the commencement of all fevers, and particularly in this, where a determination to the stomach appears from pain and spontaneous vomiting.

During the eruptive fever, it frequently happens, especially in infants, that convulsions occur. If one or two fits only appear on the evening preceding the eruption, they give a favourable prognostic of a mild disease, and require no remedy; but if they come on at a more early period, be violent, and frequently repeated, they are very dangerous, and ask for speedy relief: here an opiate given in a large dose is found the most effectual.

But notwithstanding these means, if upon the eruption the pimples on the face should be very numerous; not distinct,

Sect. 3. guarded against, if either the patient be in the prime of life, or his blood too much enriched by spirituous liquors, or it be the spring season, or,

tingt, and particularly when, upon the fifth day, the fever does not suffer a considerable remission, but after the eruption shall continue, avoiding heat, and continuing to expose the body to cool air, will still be proper. If the fever be still considerable, with a full and hard pulse, in an adult, a bleeding will be necessary and more certainly a cooling purgative. It is seldom proper to repeat the bleeding, as a loss of strength usually comes on very soon, but the repetition of the purgative, or the frequent use of laxative glysters is commonly useful.

When debility, with other marks of a putrescent tendency of the fluids, appears; it will be necessary to exhibit the Peruvian bark copiously in substance. In the same case the free use of acids, and of nitre is beneficial, and it is commonly proper to give wine liberally.

From the fifth day of the disease onward through its whole course, it is right to give an opiate twice a day, taking care at the same time, to obviate costiveness by purgatives, or laxative glysters.

From the eighth day to the eleventh, in a violent disease it is proper to lay on blisters successively on different parts of the body, and that without regard to the parts being covered with pustules.

Should the tumour on the fauces be considerable; the deglutition troublesome, the saliva, and mucus viscid, and with difficulty thrown out, it will be proper to apply blisters to the external fauces, and to employ diligently detergent gargles. The frequent exhibition of antimonials in nauseating doses has been found useful during the whole course of the disease, when any considerable fever is present. After the suppuration is finished, the fever is sometimes continued, and increased, or, as sometimes, when, after there has been little or no fever before, a fever now arises, and continues with considerable danger; this is called the SECONDARY FEVER, and requires particular treatment; when this fever follows the distinct *small pox*, and the pulse is full and hard, the case is to be treated as an inflammatory affection by bleeding, and purging. But if it succeeds the confluent kind and be a continuance or exacerbation of the fever

or, at least, only the beginning of summer. Chap. 2.
 Otherwise the separation, which should be carried on slowly and gradually, for the better promoting an universal despumation, will by this means be hurried on too fast, and thus either there will not be a sufficient number of particles collected, or perhaps some particles may be brought to secretion, which nature would not otherwise have secreted, were it not that, being forced beyond her just limits, she is thus made to hurt herself. For when such particles are separated as are unfit for separation, the motion of others, that have a tendency thereto, is hindered by their mixing with these, and thus they are rendered less fit for expulsion.

34. To me, indeed, it seems agreeable to reason, that the more time nature employs in carrying on and finishing the separation, provided the ebullition does not quite flag, so much the more certainly and universally it is completed, upon which the success of the subsequent cure must needs principally depend, as a different event must manifestly ensue from the contrary method. For as over-early fruit does not come to perfection, so no good arises from this hot regimen, but on the contrary it frequently happens that the patient either falls immediately into a *delirium*, or, which is a worse symptom,

The separation is not to be too much promoted.

Ill effects of this procedure.

ver which had subsisted before, it is to be considered of the putrid sort, some purging may be necessary, but the remedies to be chiefly depended upon, are the Peruvian bark, and acids. But after whichever species of the *small pox* the secondary fever appears, it will be useful to exhibit an antimonial emetic in nauseating doses, but in such a manner as to produce some vomiting. See Cullen's *Practice of Physic*, vol. ii. pag. 162, sect. 617, &c. W.

profuse

Sect. 3. profuse sweats arise, whereby such particles are separated as are unfit for separation, and not agreeable to the nature of *pus*, (which however is the genuine product of this separation) or else, the eruptions, being driven out too much by cardiacs and hot regimen, run altogether (a shocking sight) and forebode death.

35. These and the like symptoms are ordinarily occasioned by such errors, whereas I never observed any harm done by the other method: for nature, being left to herself, finishes her work in her own time, separating and expelling the *variolous* matter, in the proper way and manner, so as not to stand in need of our help, at least not in the young and robust. Nor in reality have I ever observed or heard that any person perished because the *small pox* did not come out at first; but too many have died in whom they came out well and hopefully in the beginning, *but afterwards struck in and sunk* * before they came to maturity.

Danger of
diminishing
the ebulli-
tion too
much.

39. But though it is improper and dangerous, by cardiacs or a hot regimen, to raise the ebullition, once begun, too high; so contrariwise the danger is equal in depressing it by bleeding, vomits, purgatives, glysters, and the like evacuations, the due secretion of the separable parts

* *But afterwards struck in and sunk, &c.* This is certainly the most common case: but the former has sometimes happened, experience evinces, where eruptions are seen lurking under the skin, and do not come freely out, the constitution of the patient is particularly to be attended to. If the re-action of the system is violent, bleeding and the mode above prescribed will answer our purpose; but should it be too languid, recourse must be had to gentle cordials, such as will accelerate the motion of the fluids, by giving a proper stimulus to the vascular and nervous system, *W.*

being

being in great measure prevented hereby. For Chap. 2.
 though the common and trite objection to bleed-
 ing and other evacuations be of no force, name-
 ly, that *it is improper to move the humours from the*
circumference to the center, as nature seems to affect
the contrary in this disease, because a quite diffe-
 rent effect has often been observed to follow up-
 on the use of these means, *viz.* a sudden erup-
 tion of the *small pox*; nevertheless there are other
 forcible reasons in readines to dissuade from this
 practice, if by any means it can be refrained.
 For, to treat briefly of the principal of them;
 (1.) by these evacuations, not only the ebulli-
 tion is too much diminished, by means of which
 the parts intended for despumation should have
 been carefully separated; but (2.) the matter
 also is wasted, which should continually serve as
 fuel to the secretion once begun, whence it fre-
 quently happens that the eruptions, which came
 out kindly in the beginning, and perhaps so
 much the better from the previous use of the
 above-mentioned evacuations, sink soon after, as
 if they were suddenly struck in; occasioned
 chiefly by want of a fresh supply of matter to
 succeed the former, and finish the separation.
 But notwithstanding what has been advanced, if
 there be the least suspicion that the *small pox*,
 which are coming out, will be of the *confluent*
 kind, it will be highly serviceable not only to
 bleed immediately, but likewise to give a vo-
 mit; for reasons we shall, in another place, set
 down at large.

Bleeding and
vomiting ex-
cellent in the
confluent
small pox.

37. (2.) To proceed now to the second indi-
 cation, which respects the time of expulsion;
 during which the separated matter is expelled
 by means of small abscesses, or pustules. Here

The second
indication,
how to be
answered.

we

Sect. 3. we are to endeavour to keep them up in a proper manner, so as they may duly and regularly reach the period assigned them.

Danger of over-heating the patient towards the beginning of the expulsion.

38. As I conceive, therefore, it has been clearly shewn that it is highly dangerous to keep the patient too hot during the time of separation, when there is a fever, and the eruptions scarce yet appear; so likewise an error of this kind is equally dangerous at any time of the disease, and especially towards the beginning of the expulsion, whilst the pustules are yet in a state of crudity. For though the blood be considerably freed from the intestine tumult, by the separation being finished, and the translation of the matter to the fleshy parts, yet being still weak, and having scarcely acquired a new state and texture, it is easily affected by the immoderate heat arising from all parts, and so, upon the least occasion given, inflames with a tendency to a new ebullition; which does not, like the former, endeavour to promote separation, for we suppose that business over; but, instead thereof, not only produces the dangerous symptoms before mentioned, but disturbs the eruption begun, and proves detrimental, by putting the contents of the pustules into violent motion. And by these means either the particles already secreted, and deposited in the habit, being hurried away by the violent and rapid motion of the blood, are absorbed thereby; or the fleshy parts, being heated beyond the degree requisite for suppuration, do not finish it so completely; or lastly, perhaps, upon the coming of this new disorder, the texture of the blood, and the tone of the fleshy parts are so broken and weakened, that they cannot overcome the matter

matter expelled, and digest it in the usual way of abscesses. Chap. 2.

39. But mean while, we must not be so intent upon preventing an immoderate ebullition of the blood, as to check the eruption of the pustules, *by exposing the patient to the injuries of the cold.** The fittest degree of heat to promote their expulsion is the natural one, and such as is suitable to the temper of the fleshy parts; and whatever exceeds or falls short of it, is dangerous on either hand.

The eruption not to be checked.

40. From what has been delivered, therefore, it seems manifest that this disease, and the proper method of curing it, rest on a slippery foundation; and for this reason I dare venture to assert, that the reputation of the physician, who is frequently employed in it, will be exposed to censure; for not only the vulgar are apt to attribute the cause of the patient's death to the officiousness of the physician, but even the professors of the same art gladly take occasion from thence to defame their brother, and haranguing before partial judges, easily get him condemned, with this view, that they may gain greater esteem themselves, and build their rise upon the ruin of others; which is a practice utterly unbecoming men of letters, and even the meanest artificers, and who have any regard for probity.

The method of curing this disease precarious.

* *By exposing the patients to the injuries of the cold, &c.* In the eruptive state of the disease, though exposing the patients to cool air has been observed to be very serviceable, and avoiding great degrees of heat; still it cannot be advisable to suffer such an exposure in inclement weather, where the cold is intense; moderate degrees may always be admitted, such as are severe ought to be prohibited for very obvious reasons. *W.*

Again,

Sect. 3. Again, we may from hence observe, which is less surprising, that nurses, who are generally too busy and officious, often succeed ill in treating the disease: for it is a difficult matter, and exceeds the understanding and abilities of ignorant women, to ascertain the degree of heat requisite in this case, especially, since in order thereto the season of the year, the age of the patient, his manner of living, and other like circumstances must be considered together, which in reality demands a prudent and skilful physician.

Cardiacs,
when and
how to be
given.

41. *If the pustules happen to strike in,** or the swelling of the face and hands sink either from unseasonable bleeding, or taking cold, recourse must be had to cardiacs, but we must be careful of giving them too freely. For though blood has been taken away, it may notwithstanding happen, that apprehending the loss of strength from thence, and therefore giving either strong cordials, or using them frequently to prevent it, a new ebullition will be suddenly raised, the blood being yet weak, and easily affected by a hot *stimulus*; whence frequent ebullitions are excited therein, to which the death of the patient is rather to be ascribed, than to the preceding bleeding. And let this suffice with respect to

* *If the pustules happen to strike in, &c.* Besides the causes here set down, there are others which are productive of similar effects, and are such as generally induce a weakened action of the nervous power — as decay of strength; fatigue; terror; too copious evacuations, &c.—Blistering in this case is essentially necessary, and the prudent use of cordials, particularly wine; and these should be exhibited in such a manner as to render them quickly efficacious; for we must endeavour to promote the re-eruption of the pustules with all possible expedition. *W.*

such

such particulars as may answer the primary intentions. Chap. 2.

42. Now, to come clofer to practice: as soon as the signs of the disease appear, I confine the patient within doors, forbid the use of wine and flesh-meats, and allow *small beer** moderately warm with a toast for common drink, and sometimes suffer it to be drank at pleasure. *For his food I direct water-gruel, † barley-gruel, roast*

* *Small beer, &c.* Small beer appears not to be the most eligible liquid for common drink, for it is apt to be too new, and tends to move the bowels too much; if, therefore, as Dr. Swan observes, there should be a looseness, or any tendency thereto, it ought to be refrained: in this case rice water, hartshorn drink, and such like, would more properly supply its place—and if it is capable of being kept till it is old, it is generally too strong, and would be disposed to increase the inflammatory symptoms. *W.*

† *For his food I direct water-gruel, &c.* With regard to diet, says Dr. Mead, it ought to be very slender, moistening, and cooling; such as *oatmeal*, or *barley gruel*, &c. Nevertheless as the food is to be adapted to the several stages of the disease, the best regimen in the beginning is that, which will keep the body open, and promote urine. These advantages are obtained by boiling preserved fruits with their food, especially *figs*, *damaſcene plums*, and *tamarinds*; and giving them subacid liquors for drink; *whcy turned with apples boiled in the milk, or with wine*; *emulsions made with barley water and almonds*; *Moselle or Rhenish wine plentifully diluted with water*; or any other things of this kind.—When this sort of diet did not keep the body open, the *Arabian* physicians added *manna* to it; but this they did sparingly, and with caution; *for it is quite necessary, says Avicen, that the body be opened at the beginning*;* which is one of the most important advices that can be given in this disease, if to it be added, that urine must be made plentifully. For there is a wonderful correspondence between the skin and the kidneys; whereby whatever fluid is wont to be secreted by the cuticular glands, may with great ease be evacuated by the

* De variolis & morbillis.

Sect. 3. roast apples, and other kinds of aliment, that are neither remarkably heating, nor cooling, nor hard to digest. Nor do I much disapprove of the common country fare, of milk with roast apples bruised in it, provided it be given warm, and sparingly. I immediately forbid a hotter regimen, and the use of all kinds of cardiacs, whereby some injudiciously endeavour to force out the small pox before the *fourth* day, which is the natural and proper time for the eruption; for I am very sure that the slower the pustules come out, the more general the separation of the variolous matter will be, the better they will ripen, and the less danger there will be of their striking in; whereas if they be driven out too soon, the matter, being yet crude and indigested, is precipitated, and deceives our expectation, like over-early fruit.

Mischief of forcing out the pustules before the *fourth* day.

43. Again, by this over-hasty procedure, there is great danger (especially in hot and florid constitutions, whose active principles more than sufficiently supply the place of cardiacs) lest nature, being too much irritated and hurried, should overspread the body with the *small pox*, and so render that the *confluent* kind, which, without this precipitancy, would have been a favourable *distinct* one. The small pox must not therefore be expelled upon the first suspicion of this disease, because the patient is generally very sick and restless before the eruption; for not a

urinary passages. Wherefore it is very proper to draw off as much of the matter of the disease as can be done, by these passages, in order to prevent the overloading of the internal parts.—Stack's *Translation of the Doctor's Discourse on the Small Pox*, pag. 35.

single

single instance can be produced of its having Chap. 2.
 proved mortal, however ill the patient has been, either because the pustules did not come out directly, or because nature was deficient in expelling them sooner or later, unless where she was prevented by an hot regimen, and an over-early use of cardiacs. For I have more than once observed in the young and sanguine, that the use of a hot regimen; and cardiacs given with design to expel the pustules before the due time, have so little promoted their eruption, that, on the contrary, they have proved a check thereto. For the blood being heated by these means, and put into a more violent motion than is requisite for performing the separation in a proper manner, only some certain signs of the disease discover themselves; the eruptions in the mean time lying concealed under the skin, and not rising higher, whatever cordials be administered to promote their elevation; till, at length, the blood being reduced to its moderate and proper temperature, by allowing the use of small beer, and taking away part of the clothes whereby the patient was considerably heated, I have commodiously made way for the eruption of the pustules, and by these means removed the danger.

44. And, in my opinion, they have as little Ill effect of
 reason on their side, *who so obstinately confine the* confining
*patient in bed,** the patient provided he keeps his room, in bed be-
 as fore the
 those fourth day.

* *Who so obstinately confine their patient in bed, &c.* Mead advises keeping the patient in bed during the first days of the distemper; for which experience convinces us there is not the least necessity; but the contrary—for keeping the patient cool, and giving him cool drink, lessens the violence

Sect. 3. } those who give cordials in so hasty and improper a manner: for *bloody urine, purple spots*, and other mortal symptoms above specified, happen only from a too-early confinement in bed, especially in young persons. But on the *fourth* day I order the patient to be put to bed, at which time, if the eruption does not come kindly forward, it is proper to give some gentle cardiac, at least once, to drive out the pustules. Amongst the medicines that produce this effect, *those called paretics, or opiates,** such as *liquid laudanum, diascordium, &c.* given in a small quantity, mixed with some proper *cordial water*, are the best for this purpose; for as they abate the ebullition of the blood, nature expels the morbid matter with greater ease and convenience. But I would not advise the giving a cardiac before this juncture, even though there be a looseness, and that should seem to indicate such a remedy. For though, as we observed above, a

Opiates best to promote the eruption.

Not to be given before the fourth day.

of febrile affection, by lowering the inflammatory state of the system, and more particularly of the skin; whereas heat contributes to increase both, and occasions a more copious eruption of the pustules. And it is on all hands acknowledged that the means made use of for moderating the general, and local inflammation here specified, to be the greatest improvements which have been made in the practice of inoculation, amongst which the exposure to cool air, and giving cold drink are considered as the foremost. *W.*

* *Those called paretics, or opiates, &c.* Though opiates are here considered as cardiacs, we cannot properly conclude that they produce their good effects from acting similar to medicines of that class, it is more probable they, by exerting their sedative power, contribute to take off the spasms from the extreme vessels of the skin, and thus by permitting a free efflux of the blood and humours there, assist in the expulsion of the morbid matter, by taking off the affection which conduces to prevent it. *W.*

looseness

looseness may sometimes precede the eruption of Chap. 2.
 the *confluent small pox*, occasioned by inflamma-
 tory *effluvia*, or humours discharged into the in-
 testines from the mass of blood, which during
 the first days of the illness is greatly heated,
 and in violent motion; yet nature will as cer-
 tainly expel these *effluvia* of the variolous mat-
 ter by the skin, whereupon the looseness goes
 off spontaneously, as she commonly does the
 same *effluvia*, which, being turned inward upon
 the stomach, occasion a vomiting in the begin-
 ning of the disease.

45. But it is to be observed, that *if I am* Bleeding,
called to a strong young man, * who, besides, has when re-
 given occasion to the distemper by too free an quisite.
 use

* *If I am called to a strong young man, &c.* A full and
 strong pulse, a redness of the face, a pain and heaviness in
 the head and loins, a swelling of the veins, youthfulness, a
 sprightly disposition, a custom of bleeding, and the sup-
 pression of a critical evacuation, indicate bleeding the first or
 second day. Thus the anxiety, and oppression of the breast
 soon vanish, the spots appear copiously in the skin, nor is
 there reason to apprehend such violent symptoms after the
 eruption. For an over-fulness of blood has often been ob-
 served to hinder the due propulsion of the *variolous* matter
 to the external parts, and occasion the pustules to appear
 openly distinct; whilst the matter left in the habit produces
 various spasmodic, convulsive symptoms, a *delirium*, a suf-
 focation, and even an apoplexy, towards the declension of
 the disease. But where the pulse is hard, low and small, the
 vessels less turgid, the strength languid, the constitution
 phlegmatic, the patient a child, or a youth, the body cor-
 pulent, a vomiting, cough, and looseness happen in the be-
 ginning of the illness, the patient subject to faint upon
 bleeding, a vein must not be opened, lest by taking away too
 much blood, the matter should be detained in the body, and
 the eruption prolonged for several days, not without dan-
 ger.—Hoff. *Med. ration. system.* tom. iv. pag. 154, 155.

It is agreed on all hands, that this remedy is not very suit-
 able to the tenderest age. But yet, as the blood of infants is

Sect. 3. use of wine, or any other spirituous liquors, I esteem it not enough to check the ebullition of the blood, for him to keep from bed, and refrain cordials, unless bleeding in the arm be also used: but if this be opposed, *on account of the prevailing prejudice of the vulgar,** at least I

generally too thick, and too much in quantity for the bulk of the body; and as they are often seized with convulsions, upon the appearance of the disease, some evacuation ought to be made; which may be safely effected by leeches applied to the temples, or behind the ears. Likewise, if blood cannot be drawn from the arm, in most young subjects either of the jugulars may be opened without inconvenience.— That regard is to be had to the patient's strength, or what age soever, is manifest to all. But the weakness is seldom so great, as not to bear some loss of blood, unless it be after some extraordinary evacuations. Nor is the pulse to be over much depended on in this case; for it often happens that the thickness of the blood prevents the secretion of the usual quantity of animal spirits in the brain, and that the vital fluids is not propelled from the heart with due force; in which case, by removing the oppression, the patient's strength is observed even to increase with the bleeding.— But in what proportion blood is to be taken away, will be best determined by the vehemence of the disease.—Stack's *Translation of the Doctor's Discourse on the Small Pox*, pag. 36, &c.

* *On account of the prevailing prejudice of the vulgar, &c.* Long continued custom is difficult to conquer, and particularly with the vulgar, when they have imbibed notions easy to be comprehended; which was the case in SYDENHAM'S time; he had to militate against an old established theory, which warranted the attempt of throwing out the morbid matter by such medicines and applications as they considered increased the expulsive power of the habit. And it was much easier to conceive this might be done by adding force to the constitution, and accelerating the circulation by heating stimulants, &c. than by means which appeared calculated to lower those powers: hence arose the difficulty he complains of — but long experience has conquered those prejudices, and principles diametrically opposite govern the present practice. *W.*

judge

judge it incumbent on me to propose it. For Chap. 2.
 by the inflammation of the blood, caused by the
 heat of the spirituous liquors, together with the
 intense heat that naturally accompanies this dis-
 ease, the motion thereof is rendered so violent,
 that it frequently bursts through the vessels into
 the bladder, or occasions purple spots, and
 other like symptoms, which perplex the physi-
 cian in the course of the distemper, and de-
 stroy the patient. — And let these rules suffice
 with respect to what is to be done before the
 eruption.

46. As soon as the pustules appear, I examine
 carefully whether they are of the *distinct* or *con-*
fluent kind; as they differ extremely from each
 other, though both have some symptoms in
 common. If therefore from the largeness, pau-
 city, and slow eruption of the pustules, the
 ceasing of the sickness, and other violent symp-
 toms, which in the *confluent* species continue
 after the eruption, they appear to be of the *dis-*
tinct kind, I order the patient to be refreshed
 with small beer, water gruel, barley water, &c.
 in the manner above directed. And if it be
 summer, the weather exceeding hot, and the
 pustules few, I see no reason why the patient
 should be kept stified in bed; but rather that he
 may rise and sit up a few hours every day, pro-
 vided the injuries arising from the extremes of
 heat or cold be prevented, both with respect to
 the place wherein he lies, and his manner of
 clothing. For when the patient sits up between
 whites, the distemper finishes its course with
 greater ease, and also more expeditiously, than
 if he had been constantly kept in bed, which
 not only prolongs the illness, but likewise pro-

What is to
 be done in
 the *distinct*
 kind.

Advantages
 of keeping
 from bed.

Sect. 3. notes the febrile heat, and occasions a painful inflammation upon the rising of the pustules. But if the coldness of the season, or a numerous eruption, makes it necessary for the patient to keep his bed constantly, I take care to prevent his lying warmer, or with more clothes on him, than he used to do whilst in health; and that only a moderate fire be made in the room morning and night, unless it be the winter season. Neither do I require he should lie always in the same place in bed, lest a sweat be raised, which I absolutely maintain (supported both by the reasons above alledged, and by experience) cannot be promoted without considerable danger.

Promoting
sweat, bad.

Warm Ca-
nary to be
given in the
declension.

47. In the declension of the illness, when the free exhalation of the *effluvia* proceeding from the *matter*, now changed into *pus*, is prevented by the hardness and dryness of the pustules, it will be proper to give five or six spoonfuls of *canary*, warm, or some other mild cardiac, *lest these putrid effluvia return again* * into the blood. And in reality at this time, and not before, cardiacs and a warmer and more cordial diet may be allowed; as sugar sops, oatmeal caudle, &c. Nor will any thing farther be needful in the kindly *distinct* sort, provided the patient will conform to this temperate method and diet; unless perhaps restlessness, watchings, or other symp-

* *Lest these putrid effluvia return again, &c.* To prevent the contents of the pustules in a state of suppuration from entering into the vessels, *Boerhaave* also observes that there is not a nobler remedy than *Canary* wine, drank moderately, *e. gr.* to the quantity of an ounce, three or four times a day. Opium may be given sparingly, to check the violent motion of the blood and juices. "If these avail not," he adds, "I know not what will relieve." *Prax. Med.* vol. v. pag. 309.

toms, threatening a *delirium*, should occasionally Chap. 2.
require an opiate.

48. This is the true and genuine method of treating this kind of small pox, and will prevail after my decease, notwithstanding the ill-grounded prejudices of those that oppose it. And though I do not deny that abundance have recovered by a contrary treatment, yet it must also be acknowledged (and is deservedly to be lamented, if it be considered that this *distinct* kind is not at all dangerous in its own nature) that numbers have died, and that many more would have perished, unless they had been saved by the cold season in which the disease happens, or by bleeding not long before, which is otherwise unnecessary and useles. For this reason, therefore, if either through the obstinacy of the friends, or the diffidence of the patient, the preceding regimen be opposed, I esteem it safest to bleed, which, indeed, though it is in its own nature prejudicial in this kind of small pox, inasmuch as it disturbs the separation, and lessens the supplies intended to keep up the eruptions and swelling, yet it makes some little amends for the injuries of the subsequent hot regimen, and therefore renders this method, which I would not use, unless compelled thereto, less dangerous.

Bleeding
sometimes
necessary.

49. From what has been said, it will be easy to solve the common difficulty; viz. *whence it happens that so few of the poorer sort die in this disease, in comparison of the rich that are destroyed thereby*; for which indeed scarce any other cause can be assigned, than that by reason of the narrowness of their circumstances, and ordinary way of living, they have not the means of injuring

Why more
rich persons
die than
poor.

Sect. 3. juring themselves, as the rich have, by a more elegant diet. But this disease has proved fatal to abundance more of the common people, since they knew the manner of using *mithridate*, *diascordium*, *hartshorn drink*, &c. than it usually did in the less learned, but more prudent ages: for at present there is scarce an house without some illiterate, presuming woman, who, to the destruction of mankind, practises an art she never learnt.—And let this suffice with respect to the cure of the *distinct small pox*.

Difference between the *distinct* and *confluent small pox*.

50. But in the *confluent small pox* there is great danger; for I judge this kind differs as much from the other, as the *plague* does from this, though the vulgar, who admit names and words for things, hold the cure of both to be the same. In this kind of disease, as it proceeds from a greater inflammation of blood, more caution is required not to heat the patient; as we observed above, in treating of the former sort. But though this kind naturally demands greater cooling than the other, yet, in order to promote the swelling of the face and hands, (without which death must ensue) and the elevation and increase of the eruptions, and likewise because the patient, on account of the painful ulcerations, cannot sit up, it is proper he should keep his body, and even his hands, in bed, provided he be lightly covered, and allowed to turn himself therein as he pleases; as we before intimated in treating of the *distinct* sort. And in the declension of the distemper, upon the approach of the *suppurative fever*, he must not only be allowed this liberty, but admonished to make use of it, and must be turned often night and day, to moderate the excessive heat,

Necessity of keeping in bed in the *confluent* kind.

heat, and prevent sweat, by which the soft humour is discharged, wherewith the *small pox* should be diluted, to render them mild. Chap. 2.

51. Since, therefore, as we remarked above, a spitting constantly accompanies this kind of small pox, which, as it is one of nature's principal evacuations, and is here substituted instead of that which should have been made by pustules (for the evacuation by pustules does not go on so well in this low and flat sort, as in the other) we must diligently endeavour to keep it at its height, and prevent its stopping too soon, either from the use of heating remedies, or by forbidding the free use of small beer, or some such liquor. Now as the spitting, in its natural order, is to begin as soon as the eruptions appear, and abate on the *eleventh* day, but not vanish entirely till a day or two after; so if it goes quite off before that day, there is danger. For as the swelling of the face, whereby some part of the morbid matter is evacuated, always vanishes on that day, if the salivation stops at the same time, the patient is infected by the variolous matter, now become corrupt, as by a poison; and there being no way left for it to pass off, the danger is imminent, unless perhaps, as it sometimes happens, the swelling of the hands (which as it comes on later than that of the face, so it goes away more slowly) be so considerable as to snatch the patient from impending death. The salivation, which is so very advantageous and necessary here, may be much promoted by drinking freely of small beer, or some other liquor that neither heats, nor excites sweat. The spitting here to be kept up.

52. But How promoted.

Sect. 3.

Opiates excellent for this purpose.

52. But besides these, in order to check the violent ebullition of the blood, in which this sort of small pox greatly exceeds the *distinct* kind, and to keep up the spitting (the necessary evacuation in this disease) opiates are more proper than any other remedies; and though by their incaffating quality they may seem in some measure to hinder the expectoration, yet I have long shaken off that prejudice, and given them in this disease with great success, provided the patient was above *fourteen*. For as the blood of infants and children, who generally sleep tolerably well throughout the course of this disease, ferments more gently, it stands less in need of such a check; and, moreover, by the use of this kind of remedy; the looseness, which nature appoints to be an evacuation for children in this kind of disease, is stopt, to the detriment of the patient.

Good effects of them in grown persons.

53. But in grown persons the frequent use of opiates is attended with the following advantages: (1.) by procuring moderate rest they abate the violent ebullition of the blood, and of course prevent a *delirium*; (2.) they promote the swelling of the face and hands in a better manner, which is a very considerable natural evacuation in this disease; (3.) they keep up and prolong the swelling to its proper natural period; which greatly contributes to the patient's safety, as the swelling of the face often falls before, to the endangering the patient; for the heat of the blood being abated, the inflammatory rays are brought in due time to the hands, face, and the whole surface of the body, according

to

to the nature of the disease; (4.) they promote the salivation, which though it may be stopt in some subjects for a few hours, by means of so powerful an incrassating medicine, yet the strength being increased by these new helps, nature resumes fresh vigour, and happily finishes the work begun; (5.) moreover, I have observed that the spitting, which usually abates about the *eleventh* day, and sometimes earlier, to the great detriment of the patient, by giving opiates a few times has been raised anew, and not ceased before the fourteenth day, and sometimes later. I usually give about fourteen drops of *liquid laudanum*, or an ounce of syrup of white poppies, in a little *cowslip-flower water*, or some such distilled water; and if either of these medicines be given to grown persons every night after the eruption is over, to the end of the disease, not only no inconvenience, but great service will thence accrue to them, as I have frequently experienced. But I judge it proper to exhibit an opiate a little earlier than is otherwise usually done; for it is easy to be observed in the worst kind of *small pox*, that a hot fit, attended with restlessness, anxiety, and other symptoms, generally comes on in the evening, which may in some measure be prevented by administering an opiate at six or seven at night.

54. In the next place, since a *looseness* as certainly accompanies the *confluent small pox* in children, as a *salivation* does the same in grown persons: nature, as we observed above, constantly providing one of these evacuations to expel the morbid matter; so I take care by no means to check

Chap. 2.

When best given.

Danger of checking the looseness here in children.

Sect. 3. *check this looseness,** any more than the salivation, both being alike improper. And the unseasonable endeavours of some imprudent women to stop the looseness has proved fatal to abundance of infants, whilst they falsely conclude it to be equally dangerous in *this* as in the distinct kind; not knowing that it is only detrimental in that kind where the evacuation is made by pustules,

* *By no means to check this looseness, &c.* A looseness, says *Hoffman*, even though it be considerable, is not to be apprehended here; for so far has it been from hindering either the eruption, or the suppuration, and striking the matter in, that I have known it run through the whole course of the distemper, without danger. And as *petechial* malignant fevers are frequently terminated *critically* by a looseness, so likewise experience shews that the same happens in the small pox. Elsewhere he says, that in a dry summer, the small pox is particularly inflammatory, and readily accompanied with a looseness, which is absolutely not to be stopped, but only moderated by proper remedies; observing to avoid the heating regimen, and warm medicines, and likewise cooling the body, and refrigerating medicines. Neither, adds he, is a looseness detrimental, when the *small pox*, by reason of the irregularity of the season, is complicated with *petechiæ*, but it is rather a wholesome remedy, and admirably purges off the malignant and excrementitious humours.

There are, however, authors who deviate from this opinion, particularly M. de Lafone, who thinks, that a diarrhoea, during the time of the eruption, is symptomatic, and that the nature of the stools, which are of the ferous or bilious kind, their quantity, fetor, and frequency are all of them obstacles to a regular progress of the disease, and the eruption is sometimes retarded, suspended, and even suppressed so as to produce a rapid and fatal metastasis. He therefore advises moderating or stopping the evacuation, and recommends the use of cows milk mixed with a decoction of parly roots, and also where the tongue and whole inside of the mouth are covered with a great number of variolous pustules. This recommendation appears to be the consequence of experience.—See *Medical Commentaries of Edinburgh*, Decade ii. vol. i. pag. 277. *W.*

but

but is here the work of nature searching a passage Chap. 2.
 for the disease to escape. Disregarding therefore
 the looseness, and assisting nature, as *Hippocrates*
 directs, I go on as I begun, advising them some-
 times to keep the children in the cradle, and
 sometimes to take them up; and if they be
 weaned, I allow them the same diet as I before
 ordered for grown persons.

55. In the declension of the disease, *when the* The face to
be anointed
with oil of
sweet al-
monds in
the decline.
face is stiff, occasioned by the eruptions * becoming
 crusty, hard, and dry, I anoint it frequently with
oil of sweet almonds, as well to ease the pain-
 thence arising, as to promote a freer exhalation
 of the hot *effluvia*. I use no endeavours to pre-
 vent the pitting of the face, inasmuch as oils,
 liniments, &c. only cause the white scurf to scale
 off more slowly, which, falling off, and coming
 on again alternately, after the patient has quit-
 ted his bed, and is pretty well recovered, is gra-
 dually succeeded by unseemly scars. But the
 patient need not be very anxious about these,
 when by reason of a previous temperate regi-

* *When the face is stiff, occasioned, &c.* Application of
 this sort by obstructing the pores, rather prevent than assist
 perspiration, therefore not likely to produce a freer exhala-
 tion of the hot *effluvia*, as our author expresses himself;
 they are apt to make also the pits more visible; for avoiding
 which many different remedies have been tried, but not any
 of them have proved efficacious.

Though MORTON observes that nothing so effectually
 prevents the erosion from the acrid matter of the pustules,
 whence those unseemly marks arise, as a plentiful use of the
 cortex; and therefore, in all cases, where it appears, that
 there is any considerable sharpness in the variolous pus, he
 advises that we should begin immediately after the drying
 of the pustules, to use this sovereign remedy. In young
 children, it may be thrown up in form of glyster, or appli-
 ed externally. W.

men,

Sect. 3. men, the eruptions, having been little irritated, have contracted no caustic quality.

A different method sometimes necessary.

56. Now, though this method, provided it be carefully and prudently suited to particular circumstances, will prevent the above-mentioned preternatural and dangerous symptoms, and render the disease very gentle and safe, yet in some cases, which I shall here subjoin, I find it necessary to use a different method, in order to overcome and remove them, from what cause soever they arise before I am called.

The face, how made to swell in the *distinct* kind.

57. First, therefore, if in the *distinct* kind, by means of an over-hot regimen, and continual sweats; the face does not swell on the *eighth* day, but is flaccid, and the spaces between the eruptions look pale, whilst these in the mean time shew themselves in great abundance, besides using my utmost endeavours for a more temperate regimen, and to check the violent motion of the blood, I immediately direct an opiate to be given, which by gently procuring sleep (unless the brain be over-heated) and consequently moderating the tumult raised in the blood, seasonably determines it, together with the heat, to the face, as the nature of the disease demands.

Opiates or bleeding, when required.

58. But if the mischief hence arising has proceeded so far, that the sweat, which had hitherto flowed plentifully, ceases spontaneously, the patient is seized with a *delirium*, complains of great sickness, and makes urine often in a small quantity; in this case, the danger of death being imminent, I conceive he can only be relieved, either by giving opiates freely, or taking away a large quantity of blood, and exposing his body to the open air. Nor, indeed, will what I have
now

now proposed seem so imprudent and unreason- Chap. 2.
 able, upon attending to those who have escaped
 imminent death, by a plentiful bleeding at the
 nose suddenly arising. Moreover, it must be
 considered that, in this dangerous extremity,
 death does not ensue because the eruptions strike
 in, for they appear red and plump, even when
 the patient is expiring, but because the face does
 not swell. Now whatever tends to abate the heat
 of the blood (and I conceive none will deny that
 bleeding and moderate cooling medicines have
 this virtue) must necessarily help to promote the
 swelling of the face, as much as the use of opi-
 ates, and apparently for the same reasons.

59. But I would not have this understood as Further ex-
 if I would advise bleeding immediately in every plained with
delirium happening in the *small pox*, since no respect to
 symptom oftener occurs in this disease; but (1.) bleeding.
 in that only which happens because the face does
 not swell, that is, in the *distinct* kind, the erup-
 tions at the same time being pretty numerous;
 or (2.) where the motion of the blood is be-
 come so violent and immoderate by means of a
 very hot regimen, and the use of cardiacs, as to
 render it unsafe to wait till it can be reduced to a
 due temper by opiates, and other medicines pro-
 ductive of the like effect. When the case is
 thus circumstanced, the physician, consulting
 his duty rather than a precarious reputation, *ought*
*either to bleed,** as above intimated, or order
 the

* *Ought either to bleed, &c.* The experience of Dr.
 Mead contradicts the opinion of Dr. Friend, with regard to
 patients always dying who were seized with a delirium on
 the fourth day of the eruption; for though this is consid-
 ered very properly as an omen of great danger, yet Dr.
 Mead

Sect. 3. } the patient to be refreshed with the open air; and to obtain the end here it has frequently seemed sufficient to me, for the patient to rise, and sit up awhile in his raving fit, by which expedient I have saved several from death. And besides those I have seen, there are numberless instances of persons who by this means have been snatched from imminent danger; for some delirious persons deceiving their nurses (and those who are light-headed use wonderful contrivances) and getting out of bed, have remained exposed to the cold air, even in the night; and others again, either by stealth, unawares, or by entreaty, have got cold water of their nurses, and drank it, and thus by a happy mistake recovered their health when despaired of.

Sitting up
awhile re-
commended
in a *delirium*.

The case of
a person re-
covered by
the like
treatment.

60. I will here communicate a single instance, which I had from the person concerned. He told me that when he was a young man, he went to *Bristol*, and was there seized with the *small pox* about *Midsummer*, followed soon after by a *delirium*. His nurse, going into the city, left him in the mean while to the care of some other persons, intending to be back soon; but making a pretty long stay, the patient in the interim died, as the attendants thought; who considering the heat of the season, and his corpulency, that the body might not smell, took it out of bed, and laid it naked on a table, throwing a sheet over it. The nurse at length returning, and hearing the ill news, entered the room to behold the sad spectacle, and imme-

diately Mead by bleeding immediately and throwing up a glyster, has prevented the fatal catastrophe, and cured many in whom this symptom made its appearance at that period. *W.*

diately

diately throwing by the sheet, and looking on his face, imagined she saw some small signs of life, and therefore put him to bed again directly, and using some means or other brought him to himself, and he recovered in a few days. Chap. 2.

61. But to resume our subject: *if the saliva in the confluent small pox** becomes so hard and viscid by the preceding heat as to endanger suffocation, which, as we observed above, commonly happens on the *eleventh* day, a gargarism must absolutely be used, and great charge given to syringe the throat with it often, night and day. *Small beer, or barley water, mixed with honey of roses,* may be used for this purpose, or the following:

A gargarism to be used when the saliva is hard and tough.

Take of bark of elm, six drams; liquorice root, half an ounce; twenty stoned raisins; red roses, two pugils; boil them together in water sufficient to leave a pint and half; in which, when strained off, dissolve simple oxymel and honey of roses, of each two ounces: mix the whole for a gargarism. The gargarism.

But if the patient has been treated in a proper manner, the salivation, even though it has begun to abate, will so effectually answer its end, as to render this remedy needless. And, in

* *If the saliva in the confluent small pox, &c.* So necessary is this discharge in the confluent small pox, that if it does not arise and continue through the whole course of the disease, the most fatal effects are to be feared. At the first, when necessary, the gentler kinds of stimulating gargles may be made use of; but if these do not succeed or fail in their power, as they are apt to do from use, those which are stronger should supply their place, such as decoctions of calamus aromaticus, mustard, horse-radish, and pepper, with the addition of oxymel. *W.*

Sect. 3. reality, when the patient is every moment in danger of suffocation, oppressed with a *stupor*, and breathes with the utmost difficulty, it is not safe to trust to this remedy. In this case I have sometimes seasonably and successfully given a vomit of the infusion of *crocus metallorum*, in a larger dose than ordinary, viz. an ounce and half; because the *stupor* is so considerable that a smaller quantity will not operate, but, by disturbing those humours which it cannot eject, greatly endangers the life of the patient. Neither can we wholly trust to this remedy, and, which is truly to be regretted, we are hitherto unprovided with a more certain and effectual one to conquer this dreadful symptom, which alone destroys most of those who die on the *eleventh* day in this kind of *small pox*.

A vomit
sometimes
successful in
this case.

Advantages
of a temperate
regimen.

A *coma*
cured by
cooling the
blood,

And purple
spots also.

62. As the other symptoms happening in this distemper are prevented, so likewise most of them are relieved by a temperate regimen. For instance, as the *delirium* above mentioned, proceeding from the too great heat of the brain, is removed by some way cooling the blood, so by the same means a *coma* is easily remedied, which seems to be a quite different symptom from the former, and arises from an obstruction of the *cortical* part of the brain from hot *effluvia*, proceeding from the blood attenuated by a hot regimen, and heating medicines, being violently driven thither in great abundance.

63. By cooling the blood in this manner, I have seen purple spots removed; but have not yet been able, by this or any other method, to stop *bloody urine*, or a *violent flux of blood from the lungs*; but so far as I have hitherto observed, both these hæmorrhages certainly prognosticate death.

64. In a suppression of urine,* which sometimes happens in young and lively persons from the great confusion and disorder of the spirits subservient to this excretion, by reason of the immoderate heat and agitation of the blood and juices, I have had recourse to all the kinds of diuretics, but nothing has succeeded so well with me as taking the patient out of bed, who being supported by those about him, and taking two or three turns cross the room, has immediately made water pretty plentifully, to his great relief. To confirm the truth of this, I might here appeal to some physicians of my acquaintance, who, by my advice, have directed the same expedient to be used in the same case, and found it answer the end.

Chap. 2.

A suppression of urine how caused and remedied.

65. But the symptoms proceeding from the striking in of the variolous matter, by intense cold, or unseasonable evacuations, must be remedied by cardiacs, and a suitable regimen; which, however, must not be continued longer than these symptoms last. The principal of these are, a depression, or sinking of the pustules, and a looseness, both in the distinct kind. For in the confluent kind neither the sinking of the pustules threatens danger, this being the nature of the disease, nor a looseness in children, because it promotes their recovery. In either case

Cardiacs, when particularly to be given in the distinct small pox.

* In a suppression of urine, &c. As patients are now sufficiently exposed to the coolness of the atmosphere, this symptom rarely arises. Mead recommends the use of diuretics, particularly Glauber's salt; but the intention of promoting urinary discharges is better answered by plentiful dilution with fig, or linseed tea, decoction of bran sweetened with honey, to which may be added nitre, or the dulcified spirit, and glysters if the patient is costive. W.

Sect. 3. it is highly proper to give a cordial draught, made of some *proper distilled waters*, mixed with *diascordium, liquid laudanum, &c.* not only in order to remove the above-mentioned symptoms, but at any time of the disease, if the patient complains of a pain at the heart and sickness. But to speak the truth, the symptoms of this kind very rarely happen, in comparison of those arising from the other more fatal, though less censured, extreme. And in reality I judge the rumour which has so much prevailed, of the frequent striking in of the eruptions, to proceed from hence, that such as have observed the depression of them in the *confluent* kind, esteemed it to be a striking in of the *variolous* matter from taking cold; whereas here, it is only the nature of the disease: and they suspect the same in the *distinct* kind, because they look for the eruptions and increase of the pustules before the due time; not having sufficiently attended to the time wherein nature usually finishes the suppuration of this sort of small pox.

When and where bleeding should be used.

66. When the patient begins to recover, and the eruptions scale off, and he has eat flesh a few days, for example, the *one and twentieth* day, *I judge it requisite to bleed in the arm,** if the disease

* *I judge it requisite to bleed in the arm, &c.* SYDENHAM lays this down as a general rule, but for which there can be no occasion, without some particular symptom shews the necessity; for the mischiefs arising in the constitution from the violence of the foregoing disease are more owing to debility of the solids, and an acrimonious state of fluids, than any other cause, purging, therefore, is absolutely necessary; soft, nutritious diet, tonics, asses milk, and gentle exercise, taking particular care that the food should not be given too copiously, but in small quantities, and properly

case has been violent: for the inflammation
 communicated to the blood by the *small pox*,
 whether in grown persons or children, equally
 indicates bleeding, as the foulness collected in
 the habit does purging; as appears sufficiently
 both from the colour of the blood taken away
 after a severe small pox, which exactly resembles
 that of pleuritics, and likewise from the great
 inflam-

Chap. 2.

perly proportioned to the strength of the digestive powers:
 if these rules are observed, with the addition of country air,
 there will seldom be any occasion for bleeding.

Our author has had all along the idea of an inflammatory
 fever attending the small pox, but this certainly is not al-
 ways the case: fevers of a very different nature are some-
 times the concomitants of the variolous infection. His mode
 of treatment is in general proper, where the disease attacks
 those who have an inflammatory diathesis in the habit:

“ But if it should seize those of a different temperament,
 “ who have been exhausted by preceding disorders, or who
 “ have weak and relaxed fibres, with a poor and thin state
 “ of fluids, and should steal on in the slow and gradual
 “ way, like a nervous fever; if the countenance should be
 “ found pale, and the pulse weak and fluttering, the urine
 “ crude and thin, no great thirst or heat, continued giddi-
 “ ness and heaviness of the head, with tremblings, and a
 “ perpetual nausea, attended with great weakness, and de-
 “ jection of spirit; in such circumstances we must endea-
 “ vour to rouse the languid animal motions, by giving
 “ warm wine, or strong sack whey, with some drops of
 “ volatile aromatic spirits in each dose, *and on no account*
 “ attempt to lessen the quantity of blood, or give any thing
 “ that may bring on a number of loose stools; in this situa-
 “ tion, indeed, a gentle emetic will be proper, as its action
 “ may not only promote the eruption, but also, by unload-
 “ ing the stomach, remove the heavy sickness, and relieve
 “ the anxiety and oppression.

“ There are other cases where bleeding is equally im-
 “ proper, and these are when we know the fluids to be in
 “ a putrescent state, or that there is a putrid fever united
 “ with the variolous matter.”—Macbride’s *Introduction to*
the Modern Theory and Practice of Physic, pag. 368.

Sect. 3. inflammations that fall on the eyes after it is gone off, and other pernicious effects, arising from the blood over-heated and vitiated thereby. Hence also it follows, that such as enjoyed a good state before they had the small pox, are afterwards afflicted with a defluxion of sharp hot humours upon the lungs, or some other part, for the remainder of life. But if the pustules were few, bleeding is unnecessary: after bleeding, I purge three or four times.

The swelling of the legs, how remedied.

67. To these observations let me add, that after the patient has been long recovered from the *confluent* small pox, and rises every day, there sometimes happens a troublesome swelling of the legs, which either goes off spontaneously after bleeding and purging, or is easily cured by the use of fomentations, made of *emollient* and *discutient* herbs, boiled in *milk*; as the leaves of *mallows*, *mullein*, *elder*, *laurel*, and *cammomile* and *melilot flowers*.—And let this suffice for the history and cure of the *small pox*, that prevailed for these two years, which I chuse to call *legitimate* or *regular*, in order to distinguish them from the other kinds that succeeded them.

To what has been said on this subject it may not be improper to add, that *MERCURY* has been, in many desperate cases, attended with the most pleasing success, and is considered by some as an excellent preparative, rendering this dangerous disease milder in its effects, and less deleterious in its consequences. An account of which may be seen in *Medical Memoirs*, published by Dr. Letson; in which are introduced a variety of cases which favour this opinion, and may justly induce the practitioner to make trial of a medicine which, from its apparent effects in these cases, promises to be of great utility in future, *W.*

C H A P. III.

Chap. 3.

The continued Fever of the Years 1667, 1668, and part of 1669.

I Proceed now to treat of the fever that prevailed during this variolous constitution,* and began and ended with the *small pox*. (1.) The patient was seized with a pain below the pit of the stomach, and such a foreness that he could not bear to have it touched, which symptom I do not remember to have observed in any other disease

The fever of this constitution described.

* *The fever that prevailed during the variolous, &c.* Dr. CULLEN ranks this disease amongst the varieties from SAUVAGES of the Synochus, which he defines—

A contagious disease; a fever composed of the synocha, or inflammatory fever, and the typhus, or nervous fever; in the beginning a synocha; in its progress and termination, a typhus.—See *Synopsis Nosologiae Methodicae*, vol. ii. pag. 78.

SAUVAGES calls it SYNOCHUS VARIOLODES, and has copied his account from SYDENHAM and HUXHAM. I confess, I do not see a sufficient affinity between the two, to warrant their being ranked as the same species. Huxham takes no notice of the profuse sweating, petechiæ, nor pyælis, which Sydenham particularly mentions, and considers the latter as a critical evacuation. Besides, the modes of cure, as delivered by Sydenham and Huxham, are widely different: however, as they both happened during the same constitution of the air in which the small pox was epidemic, they may be considered as variolous fevers, but of different species, we, therefore, think it not improper to retain Dr. Swan's note from Huxham in this place. *W.*

In 1729, in the month of *July*, the *small pox* prevailed much at *Plymouth*; and, during this month, a *slow putrid fever*, which remitted towards the end, and at length intermitted, became very epidemic there. It chiefly affected the head, stomach, and loins, as if the small pox was coming on,

Sect. 3. disease besides this fever and this kind of small pox; (2.) a pain in the head, a heat of the whole body, and also very visible *petechiæ*; (3.) little thirst; (4.) the tongue like that of a healthy person, unless that it was sometimes white, but very rarely dry, and never black; (5.) profuse spontaneous sweats in the beginning, which afforded no relief, and, being promoted by a hot

on, and was attended with an oppression of the breast, sighing, and great faintness. Such a disease it was, perhaps, that *Sydenham* intituled a *variolous fever*. It chiefly attacked children, women, young, or weak persons. The blood taken away was seldom viscid; the urine mostly crude, thin, and frequently let fall a cineritious, slimy, and imperfect sediment, resembling flour, called by *Hippocrates*, a *branny sediment*: the more perfect the sediment was, the more hopes there were of recovery. The tongue was not very dry, but appeared to be covered with a kind of viscous brownish *mucus*. Towards the declension of the distemper, a looseness, or sometimes a dysentery, especially if a vomit had been omitted in the beginning, became very immoderate, and even proved fatal to some.

Bleeding, unless in the beginning, seldom did service; vomits were highly necessary, and afterwards frequent blisters, gradually applied, gentle cardiacs, cinnabar, opiates, sack whey, and diluting subacid liquors, drank plentifully, proved very beneficial. As soon as the signs of coction appeared, namely, a sediment in the urine, and a remission of the fever, the *bark* admirably assisted the cure. If a *coma* or a *delirium* happened in the state of the disease, there was occasion to set cupping glasses on the neck and shoulders, to bleed, and immediately apply blisters, especially behind each ear, and to the head, and forthwith inject a laxative glyster.

In the declension, lenient purges, especially *rhubarb*, advantageously carried off the putrid remains of the disease; but strong purgatives, or *aloetics*, had very dangerous effects; for by the unseasonable use of these we have known the blood impoverished, and dreadful gripings occasioned: moreover, after a purgative, though it was very gentle, a paregoric draught was altogether necessary.

Numbers were seized with this distemper, but few died of it. *Huxham de Aere et Morb. epid.* pag. 33, 34.

regimen

regimen and hot medicines, soon endangered a *delirium*, augmented the number of the *petechiæ*; and rendered all the other symptoms more violent; (6.) a laudable separation in the urine from the beginning of the illness, that gave hopes of recovery, but did not relieve the patient more than the above-mentioned sweats; (7.) this disease, by wrong management, generally proved very obstinate, neither terminating by way of *crisis*, nor spontaneously in the manner of other fevers; but continued six or eight weeks, accompanied with violent symptoms, unless death interposed and put a stop to it sooner; (8.) when no considerable evacuation had preceded, and cooling julaps had been used, a pretty plentiful salivation sometimes arose towards the decline, whereby the disease was carried off beyond expectation, provided this discharge was not checked by evacuations, or the use of heating medicines.

2. Now as this fever depended upon that epidemic constitution of the air, which at the same time produced the small pox; so in effect, it seemed to be nearly of the same nature therewith, except in those symptoms which necessarily depended on the eruption. For they both attacked in the same manner, and were attended with the like pain and foreness of the parts below the pit of the stomach, there was the same colour of the tongue, and consistence of the urine, &c. The same profuse sweat arose in the beginning, and the same tendency to a salivation when the inflammation was violent, as accompanied the small pox, when it proved of the *confluent* kind. Since therefore this fever did also prevail chiefly at the time the small pox was more epidemic than

I had

Chap. 3.

Nearly resembled the small pox.

Sect. 3. I had ever known it here, no one can doubt their being of the same tribe. This I certainly know, that all the practical indications were manifestly the same in both diseases, those excepted, which the eruption of the small pox, and the symptoms thence arising, afforded, which could not be expected in this fever, because it was not attended with an eruption. And this indeed appeared very evident to me from the accurate observations I made in treating such as had either of these diseases. For these reasons I must be allowed to call this a *variolous fever*, not because I affect the giving new names to things, for no one can dislike that more than I do, but in order to distinguish it from other fevers, and on account of the great similitude which it bears to this sort of the small pox.

Therefore called a *variolous fever*.

Required a different treatment from the *small pox*.

3. But how nearly soever this fever resembled the small pox, no judicious person will conclude that it ought to be treated in the same manner; because in the small pox the inflamed particles are thrown out upon the skin, by means of little abscesses; whereas in the present fever they are discharged by salivation. For the profuse sweats at the beginning were *symptomatical*, not *critical*, nature seeming to have intended no other evacuation in this disease than a spitting; which yet she generally checks, either (1.) by a looseness, which frequently proceeds *from inflammatory rays* * conveyed through the mesenteric arteries into

* *From inflammatory rays, &c.* This expression seems to favour the idea of some authors, who contend, that there are igneous particles in the blood which are ever active, and in fevers, particularly of the inflammatory kind, are superabundant; and by their power create great heat and disturbance

into the intestines, and irritating them to discharge their contents, (as is usual also in pleurisy, and other inflammatory fevers, by reason of the great commotion of the blood and hot particles, endeavouring to be cooled); or (2.) by the profuse sweats, which, by the appointment of nature, equally accompanied this fever and the small pox; and these sweats being *symptomatical*, the salivation, that would otherwise have proved *critical*, was derived another way, whence, unless art suggested some other evacuation, the disease continued for some weeks, and did not come to concoction in the manner of other fevers. Chap. 3.

4. But to go on with our inquiry: in order to come at a better knowledge of the nature of this fever, and establish the curative indications on a solid foundation, it must be carefully noted that in the fever that prevailed during the *epidemic constitutions* which gave rise to *intermittents*, the matter to be separated from the blood was so thick, that it could not be separated without previous digestion, fitting it for a proper evacuation, at an appointed time, either by means of a *plentiful perspiration* or a *critical looseness*; so that the physician had nothing more to do than to suit the treatment to the nature of the disease, so as on the one hand to prevent its rising too high, and causing dangerous symptoms, and on the

turbance in the habit: but Sydenham means here inflammatory vapours separated from the blood, which he mentions below in the eleventh paragraph. But it will be more intelligible to our readers, to consider this looseness arising from some sharp acrimonious humours deposited in the intestines, through the mesenteric arteries, and these producing irritation, supernaturally increasing their peristaltic motion. *W.*

other

Sect. 3. other to hinder its sinking so low as to be unable to expel the morbid matter; a fever being the instrument of nature to perform this secretion.

The matter
in the *plague*
very subtile.

5. Again, there is likewise in the *plague* a matter to be separated from the blood, but as the parts thereof are very subtile and inflammable (so that sometimes when they are violently irritated, they pervade the blood like lightning, and can raise no ebullition therein) it passes through the mass in a moment, and is only stopped in a gland, or some external part, where, being entangled, it occasions an inflammation, and afterwards an imposthume. Now an imposthume is the instrument of nature whereby she expels whatever injures the fleshy part, as a fever is her instrument to carry off whatever is prejudicial to the blood. In this case, therefore, it is the business of the physician to assist nature, in a proper manner, in her endeavours to discharge the pestilential matter by these imposthumes; unless, perhaps, it should seem more adviseable to substitute some other evacuation in its stead, which might be more in his power, and he could regulate with greater certainty than that of nature. In the same manner does nature proceed in expelling the variolous matter, though it is a grosser species of inflammation, and discharged by means of numerous eruptions, instead of carbuncles and buboes, &c. so that in this case also the curative indications are to be so directed, as to promote the evacuation by the eruptions in a regular manner.

The *small pox*
a grosser species
of inflammation.

No such
gross matter
in this fever.

6. But as in this kind of inflammatory fever we meet with no such gross matter requiring previous digestion before it can be expelled, as in the intermitting fever above described, so it

is a fruitless endeavour to promote the ebullition Chap. 3.
 in order to procure this kind of digestion. On
 the contrary, this procedure endangers the in-
 creasing a disease, the essence whereof consists in
 a very violent inflammation, and must likewise
 be improper here, because nature has appointed
 no evacuation for this fever by eruptions, as we
 see in *pestilential fevers* and the *small pox*; though
 in other respects it resembles the latter. Hence
 it follows, that the whole of the cure necessarily
 consists in checking the inflammation, by eva-
 cuations and cooling remedies. Having this
 end therefore in view, I attempted the cure of
 this fever by the following method, to which it
 readily yielded.

7. Being called to a patient, I immediately Its cure.
 directed bleeding in the arm, *if great weakness,*
*or especially old age did not contra-indicate,** and or-
 dered the operation to be repeated every other
 day, for twice, unless the signs of recovery ren-
 dered it unnecessary. On the intermediate days
 I prescribed a glyster of milk and sugar, or the
 like, to be injected, and directed the following
 julap, or one of the same kind, to be frequently
 used throughout the course of the disease:

* *If great weakness, or especially old age, &c.* The first
 of these *always* requires such a prohibition; but the latter
 need not be so universal, because in old people it will be
 sometimes necessary to bleed, if they should be of a strong
 plethoric habit; and though they may not bear the repeti-
 tion, or any copious discharge, so well as those who are
 younger, yet still a moderate use of the lancet will now and
 then, when judiciously applied, have very salutary effects;
 but, like most other remedies that tend to lessen the powers
 of the constitution, it must be regulated according as neces-
 sity, depending on the nature of the symptoms, demands.

Take

Sect. 3.

The cooling
julap.

Take of the distilled waters of purslain, lettuce, and cowslip flowers, of each four ounces; syrup of lemons, an ounce and half; syrup of violets, an ounce; mix them together for a julap; and let three ounces of it be taken four or five times a day, or at pleasure.

I allowed whey, barley water, and such liquors, for common drink; and for diet, barley broth, water gruel, panada, roast apples, &c. but I forbade chicken broth, or any kind of broth made of flesh.

The danger
of keeping
the bed in
this fever.

8. I chiefly recommended that the patient should not keep his bed constantly, but rise every day, and sit up a good part of the day, having observed in this fever, as in the pleurisy, rheumatism, and all other inflammatory disorders, wherein bleeding and the cooling regimen are the principal remedies, that neither the most cooling medicines, nor frequent bleeding, can do service, whilst the patient lies perpetually in bed, and is inflamed by the heat thereof, especially in the summer season. And upon this account the sweat which flowed at times did not deter me from this method of cooling, both by giving cooling medicines, and forbidding a constant confinement in bed. For though one might reasonably expect great advantages in pursuing an indication taken from what generally proves serviceable, yet I have found, by constant experience, that the patient not only finds no relief, but contrariwise is more heated thereby; so that frequently a *delirium*, *petechiæ*, and other very dangerous symptoms immediately succeed such sweats, which seem to arise more from wrong manage-

management than* from the malignity of the disease. Chap. 2.

9. If it be here objected that this method of curing fevers runs directly counter to the theory of those authors, who unanimously maintain that a fever is most properly and naturally cured by sweat; besides the testimony of a never-failing experience, which is always on my side in the cure of this particular fever, these reasons also favour my practice: First, I imagine that those who contend for promoting sweat in order to take off a fever, mean such a one as appears after the previous digestion of some humour lodged in the blood, in preparing and moulding of which, that it might be discharged by sweat, nature has employed some certain fixed time. But here the case is quite otherwise, for profuse sweats arise in the beginning of the disease, and

* *More from wrong management than, &c.* This is too often the case in the beginning of fevers at this day, from the abuse of our author's favourite remedy; which may probably arise from practitioners not considering, or being totally ignorant from what different causes similar symptoms will arise, and from perceptible mischiefs not immediately succeeding the operation; though, in many instances, in the last stages of febrile affection, we have seen extreme debility induced from this circumstance: for in some fevers, particularly of the putrid class, though they may make their attack with apparently strong vascular exertion, yet still great loss of strength naturally succeeds, which bleeding is apt to hurry on, and increase in no small degree: in all fevers, therefore, where the attack is sudden, and great prostration of strength, though the pain in the head should be acute, the pulse frequent, and the heat of the body supernaturally augmented, still these circumstances authorise not the use of the lancet, for they arise more from nervous affection than vascular plenitude; which last alone can, in such general affections, make bleeding safe and beneficial.

Sect. 3. alone make a considerable part thereof; and if we may judge from all the symptoms, this disease seems to proceed rather from the sole heat of the blood, than from some humour concealed therein, to be expelled, after due concoction, by sweat. But granting there is such an humour to be found in this fever, as requires to be ripened by digestion, which is the case in many other fevers; yet to what purpose is it to comply with nature (whose violent efforts it is our business to moderate) by promoting these sweats with cardiacs, or a hot regimen, when she exerts herself too much already, since the trite axiom of *Hippocrates*, namely, that *concocted and not crude matters are to be evacuated*, relates to sweating as much as to purging?

Exemplified
in a case.

10. Whilst this constitution prevailed, I was called to Dr. *Morice*, who then practised in *London*, and now in *Petworth*. He had this fever, attended with profuse sweats and numerous *petechiæ*. By the consent of some other physicians, our joint friends, he was bled, and rose from his bed, his body being first wiped dry. He found immediate relief from the use of a cooling diet and medicines, the dangerous symptoms soon going off; and by continuing this method recovered in a few days.

Bleeding and
cooling me-
dicines best
to stop the
looseness.

11. But to resume our subject: neither did the looseness, which often accompanied this fever, at all hinder my proceeding in the above-mentioned method; having experienced that *nothing proved so effectual in stopping this discharge,**

* *Nothing proved so effectual in stopping, &c.* Might not the method recommended by *Lassone*, in stopping the variolous and morbillous diarrhœa, be here effectual? There seems nothing to prevent the trial.—See our Note *, page 190. *W.*

as bleeding, and cooling the blood by barley water, whey, and other things above enumerated; inasimuch as this looseness proceeded from inflammatory vapours, separated from the blood through the mesenteric arteries into the intestines, and vellicating these parts. Chap. 2.

12. In reality, this method succeeded admirably with me in the cure of this disease, and seemed better adapted to it than any other. I have, however, sometimes seen a very different method used with success, namely cardiacs and the hot regimen, but the patient always appeared to me to run great hazards unnecessarily. For by this means the *petechiæ*, which were otherwise very few, became exceeding numerous; the thirst, that was generally inconsiderable, was extremely increased, and the tongue, that was otherwise moist, and not much unlike that of healthy persons, except, as we said above, that it was whitish, appeared dry and crisp, and frequently turned black. Lastly, even the sweats, which they endeavoured to force by means of cardiacs, were at length entirely stopped thereby. For too large a quantity of *serum* being drained off by the cutaneous ducts, the blood became unable to furnish more of it, and the fluid part being quite wasted, wherewith it should have been diluted, a dryness of the skin, and a stoppage of the pores ensued, (contrary to the ordinary course nature used to observe in this fever) till at length the blood, being again replenished by the moisture received from the aliment taken in, expels this *serum* together with the fever, partly by medicine, and partly by the force of the fever itself. But in reality this *crisis* was too forced, and too dangerous, and, which is still worse, it seldom happened.

Sect. 3.

This fever
terminated
by a saliva-
tion.

13. But since, as we observed above, the solution or cure of this fever, and of the *small pox* likewise, which so nearly resembles it, was frequently effected by a salivation, which always proved beneficial; so that when it flowed copiously, I have known both the purple spots and fever vanish; upon this account, therefore, when the salivation begins, no evacuation must be made, either by bleeding or glysters, since by the use of either, it is odds but the humour is carried another way. But whey and other cooling things promote the necessary business of salivation; as, on the contrary, cardiacs, and all heating things, by thickening the matter, check its discharge.

The rise of
the epidemic
looseness.

14. Before this fever went quite off, and particularly in the year 1668, a *looseness* became epidemic, without any manifest sign of a fever, for the constitution at this time inclined to the *dysentery*, which prevailed in the following year, whereof we shall treat in the next section. Nevertheless, I judge this looseness to be the same fever with the then reigning variolous fever, and that it only differed in form, and appeared under another symptom. For having observed that a chilness and shaking did likewise ordinarily precede this looseness, and further, that it generally arose from the same cause with the then reigning fever, it seemed probable to me that this fever proceeded from inflammatory rays turned inwards upon the intestines, and irritating them to this discharge; whilst the blood, in the mean time, by this revulsion, was freed from the ill effects these rays would otherwise have occasioned, without any visible external sign of a fever. To this we may add, that the parts below

low the pit of the stomach were so tender as not to abide the touch, which symptoms, as we mentioned above, happened in the small pox and fever of this constitution; and the same pain and tenderness of the flesh often reached to the *epigastrium*, and sometimes there was an inflammation, which ended in an imposthume, and destroyed the patient: all which apparently shewed this looseness to be of the very same nature and essence with the then reigning fever: and this opinion of mine was further confirmed from the good success, which bleeding and the use of cooling regimen always had in stopping this looseness, for it readily yielded to this method, which is the same we used in the cure of the variolous fever, as we have frequently mentioned above. But when it was treated in a contrary manner, either (1.) by giving *rhubarb*, and other *lenient purgatives*, to carry off the acrimonious humours, supposed to irritate the intestines to these discharges; or (2.) by administering *astringents*; this disease, though naturally gentle, frequently proved mortal, as the bills of mortality of the current year sufficiently testified.—And let this suffice for the epidemic diseases that depend on this constitution.

Chap. 1.

Bleeding and a cool regimen successful in stopping it.

Lenient purgatives and astringents extremely prejudicial.

SECTION IV. CHAP. I.

The epidemic Constitution of part of the Year 1669, and of the Years 1670, 1671, 1672, at London.

1. IN the beginning of *August*, 1669, the *cholera morbus*, the *dry gripes*, and likewise a *dysentery* that rarely appeared during the ten preceding

Sect. 4. ceding years, began to rage. But though the *cholera morbus* proved more epidemic than I had ever known it before, yet nevertheless it terminated this year in *August*, as it always does, and scarce reached the first weeks of *September*. But the dry gripes continued to the end of *autumn*, and accompanied the dysentery, and prevailed more generally than that distemper. But upon the coming in of *winter*, this disorder likewise vanished, and appeared no more throughout the subsequent years wherein this constitution prevailed, whereas the dysentery became more epidemic. Now I judge the cause of this to have been, that the then reigning constitution had not yet so perfect a tendency to a dysentery, as to be able to produce all those symptoms in every subject, which affect such as are seized with this disease; for in the following *autumn*, when the gripes returned, the *dysentery* was accompanied with every pathognomic symptom.

The rise of
the dysenteric
fever.

2. Between these gripes and the above-mentioned dysentery, which raged very universally, a new kind of fever arose, and attended both diseases, and not only attacked such as had been afflicted with either of the former, but even those who had hitherto escaped them, unless that sometimes, though very seldom, it was accompanied with slight gripings, sometimes with stools, and at others without. Now as this fever in some measure resembled that which frequently attended the above-mentioned diseases, it must be distinguished from others, by the title of the *dysenteric fever*; especially since, as we shall afterwards shew, it only differed from the genius and nature of the dysentery in this particular, that it had not those discharges which always

ways accompany the dysentery, nor the other effects necessarily occasioned by this evacuation. Upon the approach of winter the dysentery vanished for a time, but the dysenteric fever raged more violently; and a mild *small pox* also appeared in some places. Chap. 1.

3. In the beginning of the following year, namely, in *January*, the *measles* succeeded, and increasing every day till the vernal equinox, suffered few families, and particularly no children, to escape. But from this time they abated nearly in the same degree they had increased, and appeared no more throughout all those years wherein this constitution prevailed, excepting only the following year, in which they seized a few at the same time they arose in the preceding year. The measles appeared in January 1670.

4. This kind of the *measles* introduced a kind of *small pox*, which I was hitherto unacquainted with, so that to distinguish it from the other kinds, I chuse to entitle it the *anomalous* or *irregular small pox* of the *dysenteric constitution*, because of its irregular and uncommon symptoms, which differed considerably from those of the *small pox* of the foregoing constitution; as will appear hereafter, when we come to give the history thereof. The *small pox*, though not near so common as the *measles*, attacked several persons till the beginning of *July*, when the dysenteric fever prevailed, and became epidemic. But upon the approach of autumn, namely in *August*, the dysentery returned, and made a greater devastation than in the preceding year, but it was checked by the winter's cold, as before; and these being conquered, the dysenteric fever and introduced an anomalous small pox.

Sect. 4. fever and small pox raged the winter throughout.

Intermittent tertians arose in Feb. 1671.

5. But about the beginning of *February* in the following year, *intermittent tertians* arose, whence both diseases became less frequent. And although these tertians were not very epidemic, yet prevailed more generally than I had ever seen at any other time since the close of that constitution, which, as we before observed, had so remarkable a tendency to produce them. But these, according to the manner of vernal intermittents, went off immediately after the summer solstice. In the beginning of *July* the dysenteric fever again resumed the station it held in the preceding years; and towards the decline of autumn, the dysentery returned a third time, but did not rage so much as in the immediately foregoing year, wherein it seemed to have arrived at its height: but upon the approach of winter it vanished, and the dysenteric fever and small pox prevailed during the rest of that season.

The order in which the epidemic diseases proceeded in 1671.

1672.

6. We observed above, that at the beginning of the two preceding years, two remarkably epidemic diseases raged (*e. gr.*) the *measles* at the beginning of 1670, and *intermittent tertians* at the beginning of 1671, and prevailed so considerably as to overpower the small pox, and prevent its spreading much in the beginning of these years. But in the beginning of 1672, when those obstacles to its progress were removed, and this distemper reigned alone, it of course proved very epidemic till *July*, when the dysenteric fever again prevailed, but soon gave place to the dysentery, which returned a fourth time in *August*, and was then not only less frequent, but attended

attended with milder symptoms than in the former years. Moreover, the small pox likewise attacked a few, so that it was not easy to distinguish which of the two diseases prevailed. I conceive indeed that the constitution of the air having a less tendency to produce the dysentery, rendered the small pox powerful enough to equal it, otherwise than it happened in those years wherein the dysentery proved extremely mortal in *August*. The winter, as usual, put a stop to the dysentery, but the fever and small pox remained, and the latter, according to its nature, became the chief disease, and continued all winter, and attacked a few in the following spring, and likewise in the beginning of summer; but it was considerably milder than this kind had been before.

7. But when I affirm that one epidemic disease is expelled by another, I do not mean that the yielding disease becomes quite extinct, but only less frequent; for during this constitution each disease appeared even in that season which least favoured it. For instance, the dysentery, though it be a disease particularly belonging to *autumn*, did perhaps attack a few in the spring, but very rarely.

8. We have therefore sufficiently proved that, during the course of this constitution, the dysenteric fever prevailed in the beginning of *July*, in which month *autumnal* fevers as certainly arise, as vernal ones do in *February*. But upon the approach of autumn the dysentery succeeded it, which, strictly speaking, is an autumnal disease; and this being overcome by the winter, the dysenteric fever and the small pox prevailed, which last distemper continued all that winter, the next

Chap. 1.

How the diseases succeeded each other during this constitution.

Sect. 4. Spring, and ensuing summer, till the return of *July*, when it was expelled by the epidemic dysenteric fever.—And these were the revolutions that happened whilst this constitution lasted.

Every general constitution has its peculiar periods.

9. It must further be observed, that as each epidemic disease is attended with its periods of increase, height, and decline, in every subject; so likewise every general constitution of years that has a tendency to produce some particular epidemic, has its periods, according to the time it presides; for it grows every day more violent, till it comes to its height, and then abates nearly in the same degree, till it becomes extinct, and yields to another. But with respect to the symptoms, they are most violent in the beginning of the constitution, after which they gradually abate, and in the close thereof are as mild as the nature of the disease, whence they proceed, will give leave: which appears manifest in the dysentery and small pox of this constitution, as we shall presently shew more at large. I proceed now to treat particularly of the diseases of this constitution, according to the order which they observed.

C H A P. II.

Of the Cholera Morbus of the Year 1669.

When the cholera morbus arises.

1. **T**HIS disease, as we before said, was more epidemic in the year 1669, than I ever remember to have known it in any other. It comes almost as constantly at the close of *summer*, and towards the beginning of *autumn*, as swallows in the beginning of *spring*, and cuckows towards

towards *midsummer*. There is also an indisposi-
 tion caused by a surfeit, which happens at any
 time of the year, which with respect to its symp-
 toms resembles the *cholera morbus*, and yields to
 the same treatment, and yet it is of a different
 kind. *The cholera morbus** is easily known by
 the following signs: (1.) immoderate vomiting,
 and a discharge of vitiated humours by stool,
 with great difficulty and pain; (2.) violent pain
 and distension of the *abdomen*, and intestines;
 (3.) heart-burn, thirst, quick pulse, heat and
 anxiety, and frequently a small and irregular
 pulse; (4.) great *nausea*, and sometimes colli-
 quative sweats; (5.) contraction of the limbs;
 (6.) fainting; (7.) coldness of the extremities,
 and other like symptoms, which greatly terrify the
 attendants, and often destroy the patient in twenty

Chap. 2.

Its symp-
toms.

* *The cholera morbus, &c.* The disease here described by Sydenham, is the true *cholera morbus*, and may be concisely defined, "A vomiting, and at the same time a purging of a bilious humour, attended with anxiety, gripings, and spasms of the extremities." It is considered of two kinds, "first, called *spontaneous*, when it arises in warm weather without any manifest cause; second, *accidental*, from acrid materials taken into the habit; and sometimes it is only symptomatic.—See Cullen's *Synopsis Nosologiæ Methodicæ*, vol. ii. pag. 240.

The vomiting and purging combined, and acting together, or alternately, are the principal symptoms, what is evacuated consisting for the most part of bile. Hence is it concluded, that the immediate cause of this complaint is violent contractions of the stomach and intestines, occasioned by an increased bilious secretion, and copious effusion into the alimentary canal; the bile being also of a more acrid quality than natural: hence the restlessness, anxiety, gripings, &c. It differs from a bilious diarrhœa, in being constantly attended with ventricular evacuations, and being more replete with danger. *W.*

Sect. 4. four hours. *There is likewise a dry cholera* * caused by a *flatus*, passing upwards and downwards, without retchings, or stools, which I never saw but once, and that was, at the beginning of the present *autumn*, when the former kind was very common.

The dry cholera extremely rare.
Purgatives and astringents bad in the cholera morbus.

2. Much consideration and experience have taught me, that to endeavour on the one hand to expel the sharp humours which feed this disease by *purgatives*, would be like attempting to extinguish fire with oil, as the most lenient cathartics would increase the disturbance, and raise new tumults. And, on the other hand, to check the first effort of the humour in the very beginning by *opiates* and other *astringents*, whilst I prevented the natural evacuation, and forcibly detained the humour in the body, would doubtless destroy the patient by an intestine commotion, the enemy being pent up in the bowels. These reasons therefore led me to keep the middle path, *viz.* partly to evacuate, and partly to dilute the humour; and by *this method*, which I found out and experienced many years ago, I have always conquered this disease. †

3. Let

* *There is likewise a dry cholera, &c.* This is a considerable distension of the stomach and bowels by flatulent vapours, which are plentifully discharged both upwards and downwards, with extreme anxiety: a remarkable instance of which may be found in *Act. Med. Berolin.* Dec. ii. vol. iii. pag. 73.

It is also mentioned, according to SAUVAGES, by *Galen*, cholera, from *flatus*: by *Menjotius*, flatulent choleric; by *Riverius*, suppressed cholera; by *Langius*, hypochondriac cholera; and by *Hippocrates*, dry cholera.—*Nosologia Methodica*, vol. ii. pag. 352. *W.*

† *By this method I have always conquered this disease, &c.* This mode of cure has been long adopted, and in the genuine

3. Let a chicken be boiled in about three gallons of spring water, so that the liquor may scarce taste of the flesh; and let several large draughts of it be drank warm, or, for want of it, of posset drink. At the same time a large

Chap. 2.

How to be treated.

nuine cholera, established by successful experience.—Dr. Charles Ayrton Douglas first orders plentiful dilution with warm water, and afterwards recommends a drink to be copiously taken, made of a decoction of oat bread, baked without leaven or yeast, carefully toasted as brown as coffee, but not burnt; which decoction ought to be of the colour of weak coffee: this he affirms is most grateful to the stomach; and he does not remember that it was ever vomited up. He thinks, also, that wheat bread, or meal well toasted, may be equally effectual.—Dr. CULLEN, after plentiful dilution, both by the mouth and anus, with mild diluents; after the redundant bile seems sufficiently washed out, and even before that, if the spasmodic affections of the alimentary canal become very violent, and are communicated in a considerable degree to other parts of the body, or when a dangerous debility seems to be induced, obviates the irritation by opiates in sufficiently large doses, but in small bulk, and gives them either by the mouth or by glyster. And when the operation of the opium is over, should the disease shew a tendency to return, and for at least some days after the first attack the irritability of the intestines, and their disposition to fall into painful spasmodic contractions, seem to continue, he advises a repetition of opiates for several days, and in order to conquer the debility commonly induced, with opiates he employs the Peruvian bark, from its tonic powers—*Practice of Physic*, vol. iv. pag. 46. sect. 1462, &c.—In this disease the radix Columbo is esteemed by some practitioners, and with great justice, highly efficacious. It is said to require rarely any means to be used previous to its exhibition, for discharging the bile, or clearing the stomach and intestines, though plentiful dilution in the beginning I have found useful. It may be given in tincture, decoction, extract, or powder, but the last is preferable—in doses of from fifteen grains to two drams, given every three or four hours in any simple water, such as peppermint or cinnamon, it proves most commonly successful. *W.*

quantity

Sect. 4. quantity of the same is to be given at several times, successively, by way of glyster, till the whole be taken in and discharged by vomiting and stool. An ounce of the *syrup of lettuce, violets, purslain, or water lily*, may now and then be added to the draughts and glysters; but the chicken water will answer the end pretty well alone. The stomach in this manner being often loaded with a large quantity of liquor, and its motion, as it were, inverted thereby, and glysters being frequently thrown in, the sharp humours are either evacuated, or, their acrimony being blunted, restored to their due temper and mixture.

An opiate,
when to be
given.

4. When this business is over, which requires three or four hours, an opiate completes the cure. I frequently use the following, but any other may be substituted in its stead :

An anodyne
draught.

Take of cowslip flower water, an ounce; aqua mirabilis, two drams; liquid laudanum, sixteen drops; mix them together.

This method
is safer and
quicker than
the common
one.

5. This method of diluting the humours is abundantly safer and quicker than the ordinary one of treating this dangerous disease, either by *evacuants*, or *astringents*; for evacuants increase the disturbance and commotions, and astringents detain the enemy in the bowels, so that, not to mention the trouble occasioned by prolonging the disease, there is danger lest the vitiated humours get into the blood, and cause a fever of a bad kind.

When *laudanum*
is to be
immediately
given.

6: But it must be carefully noted, that if the physician be not called till the vomiting and looseness have continued, for instance, ten or twelve hours, and the patient is exhausted, and the extremities are grown cold, he must then,
omitting

omitting all other remedies, have immediate recourse to *laudanum*, the last refuge in this disease; which is not only to be given during the urgency of the symptoms, but repeated every morning and night after the vomiting and looseness are gone off, till the patient recovers his former strength and health. Chap. 2.

7. Though this disease be epidemic, as we remarked above, yet it very rarely lasts longer than the month of *August*, * wherein it began; whence

* *Longer than the month of August, &c.* Though our author considers this distemper to be confined to the month of August, yet has he observed that it sometimes appears towards the end of summer, when the season was unusually warm, and that in proportion to the heat, the violence of the disease was greater. From the observation of others, it has shewn itself more early in the summer, and always sooner or later according as the great heat sooner or later set in; hence it is concluded, that disease is the effect of a warm atmosphere producing some change in the state of the bile, either rendering it more acrid, or more copious, and thus preparing it to pass off in larger quantity than usual. But there are other causes, which we have specified, creating a second species of cholera, which require different treatment. If it should be occasioned by *corrosive poison*, all such things ought to be given as will sheath the stomach and intestines from the force of its irritating power, such as the mild expressed oils, decoction of linseed, hartshorn shavings, water gruel, &c. but particularly milk mixed with absorbent powders. — *If by strong emetics, and purgatives*, warm opiates should be given, the stomach and abdomen fomented with spirituous and strengthening fomentations, and afterwards embrocations of volatiles, essential oils, &c. mixed with opiates should succeed.

If from a crapula, or surfeit, the stomach and intestines should be emptied as soon as possible by emetics, and gentle cathartics, and diluting liquors plentifully supplied; afterwards we should have recourse to tonics.

If from violent fits of anger, cooling nitrous medicines with mucilaginous decoctions, with gentle opiates; these will aid

Sect. 4. whence one may take occasion to consider the elegant and subtle contrivance nature uses in producing epidemic diseases. For though the same causes entirely remain, which may occasion this distemper in several persons towards the end of *September* as well as in *August*, namely, a surfeit of fruit, yet we find the same effect does not follow. For whoever carefully attends to the appearances of a *legitimate* or true *cholera morbus*, of which only we now treat, must acknowledge that the disease occasionally happening at any other time of the year, though proceeding from the same cause, and accompanied with some of the same symptoms, totally differs from that just mentioned; as if there lay concealed some peculiar disposition in the air of this particular month, which is able to impregnate the blood, or ferment of the stomach, with a kind of specific alteration, adapted only to this disease.

A surfeit totally different from the true cholera morbus.

aid in mitigating the disturbance, sheathing and correcting the acrimony of the bile, which being effected, gentle vomits, and mild purgatives may be administered, though at first these last should by no means be had recourse to, lest an inflammation of the stomach should be the consequence. And it should be observed in the genuine cholera, as well as in this which may arise from some accidental cause, if the patient is of a plethoric habit, and the pulse full and hard, we should bleed, which will sometimes alone stop the vomiting. Boerhaave highly extols oleum sulphuris per campanam in a cholera arising from a surfeit of fruit in autumn, however as this preparation is now seldom made, the vitriolic acid properly diluted will answer every good purpose.

W.

Of the Dysentery of part of the Year 1669, and
of the Year 1670, 1671, 1672.

1. **I**N the beginning of *August*, 1669, as before The rise and progress of the dry gripes. observed, the *dry gripes* appeared, and during the course of that autumn equalled, or rather exceeded the *dysentery* which arose with them, in respect to the numbers they attacked. Sometimes a fever accompanied them, and sometimes not; but they exactly resembled the gripes which attended the dysentery that prevailed at the same time; for they were extremely violent, and attacked at intervals, but no natural or mucous stools succeeded. They prevailed equally with the dysentery throughout this autumn, but appeared no more epidemically in the following years of this constitution. As To be treated as the dysentery. these dry gripes differ little either in their nature, or the method whereby they were easily removed, from the dysentery, *I proceed to treat of this last distemper.**

2. It

* *I proceed to treat of this last distemper, (dysentery) &c.* In the *Synopsis Nosologiæ Methodicæ Culleni* we find a concise and accurate definition of the dysentery, with the causes of its variations. It is there said to be, a contagious, febrile affection; with frequent mucous or bloody stools, the alvine fæces for the most part being retained, attended also with gripings and tenesmus; varying according as it is accompanied either with worms; *the rejection of fleshy, or sebaceous substances; an intermittent fever; without blood; or having miliary eruptions as its associate;* hence called, *DYSENTERIA verminosa; carnosa; intermittens; sine sanguine; & miliaria;*—and it is also sometimes dependant on other diseases, hence is it symptomatic: its remote cause is considered

Sect. 4.

The dysentery usually comes in the beginning of autumn.

2. It has been already remarked that the dysentery generally comes, as the present one did, in the beginning of *autumn*, and goes off for a time upon the approach of winter; but when a series of years are too much disposed to produce it epidemically, it may seize a few at any other time, and abundance at the beginning of spring, or perhaps earlier, if warm weather immediately succeeds a severe frost, terminated by a sudden thaw. And though very few may be attacked with it, yet as this happens at so unusual a time, I am well convinced that the constitution eminently favours this disease. Thus it happened in those years wherein the dysentery proved very epidemic; for sometimes, as we observed above, it seized a few towards the end of winter, or beginning of spring.

Its symptoms.

3. It sometimes begins (1.) with a chillness and shaking, immediately succeeded (2.) by a

considered to be a specific contagion, and the proximate, or at least the chief part of the proximate cause, on an attention to which the cure in a great measure depends, consists in a preternatural constriction of the colon, occasioning at the same time those spasmodic efforts which are felt in severe gripings, and which efforts propagated downwards to the rectum, occasion there the frequent mucous stools, and tenesmus.—Dr. Cullen seems to be doubtful whether this explanation will be admitted, but the reasons he offers in its support, as experience confirms their validity, are tolerably conclusive; for he observes, that it is certain, that the hardened faeces retained in the colon are the cause of the griping, frequent stools, and tenesmus, because the evacuation of their faeces, whether by nature or art, gives relief from the symptoms mentioned; and it will be more fully and usefully confirmed by this, that the most immediate and successful cure of dysentery is obtained by an early and constant attention to the preventing the constriction, and the frequent stagnation of faeces in the colon.—

W. Cullen

heat

heat of the whole body, as is usual in fevers, Chap. 3.
 and soon after (3.) gripes and stools follow: it
 is indeed, frequently, not preceded by a fever,
 but the gripes attack first, and stools soon suc-
 ceed; (4.) however, intolerable gripings, and
 a painful descent, as it were, of all the bowels
 always accompany the stools, which are very fre-
 quent; and (5.) all mucous,* not excrementitious,
 unless that sometimes an excrementitious one in-
 tervenes without any considerable pain; (6.)
 the mucous stools are generally streaked with
 blood, but sometimes not the least blood is
 mixed with them, throughout the whole course
 of the disease; nevertheless if they be frequent,
 mucous, and accompanied with gripings, the
 distemper may as justly be entitled a dysentery,

* *Stools, all mucous, &c.* These are very various; where they are merely mucous, the disease has been called, *morbus mucosus*, and *dysentery alba*. But, for the most part, along with the stools there is a mixture of blood; sometimes the mucus is only streaked with blood; sometimes more uniformly mixed; and sometimes pure blood is in considerable quantities evacuated: in other respects the matter voided is variously changed in colour and consistence; and the stools are all along distinguished by a peculiar smell, different from what is common and natural; though this is always offensive, yet not so extremely bad at first, but towards the end of the disease; and in cases that turn out mortal, the faecor is cadaverous and intolerable: sometimes it is probable a genuine pus is voided, and frequently a putrid sanies; proceeding from gangrenous parts. These are very often mixed with the liquid matters, some films of a membranous appearance, and frequently some small masses of a seemingly sebaceous matter. When the natural faeces appear, though it is seldom, in them, they are in the form of scybala, that is, in somewhat hardened, separate balls, which, however produced, procure a remission of all the symptoms, and more especially of the frequent stools, griping, and tenesmus.—Cullen's *Practice*, and Macbride's *Introduction*. W.

Sect. 4. as if blood was discharged along with them.

A hot regimen and
cardiacs de-
rimental.

(7.) Farther, *if the patient be in the vigour of life, or has* * been heated by cardiacs, a fever arises, and the tongue is covered with a thick, white *mucus*; and if he has been very much heated, it is black and dry; great loss of strength and lowness of spirits, and all the signs of an ill-conditioned fever are joined with it. (8.)

This disease occasions extreme pain and sickness, and greatly endangers life, if unskilfully treated; for when the spirits are much exhausted, and the vital heat diminished by frequent stools, before the matter can be expelled from the blood, a coldness of the extremities ensues, and there is danger of death even within the periods of acute diseases. But if the patient escapes for this time, several symptoms of a different kind succeed; for instance, sometimes in the progress of the disease, instead of those sanguineous filaments which are usually mixed with the stools in the beginning, a large quantity of pure blood, unmixed with *mucus*, is voided at every stool, which, as it manifests an erosion of some of the larger vessels of the intestines, threatens death. (9.) *Sometimes also the intestines are affected with* * an incurable gangrene, caused by the violent inflam-

* *If the patient be in the vigour of life, or has, &c.* There seems to be no necessity for either of these circumstances to produce the fever; because it is always an attendant symptom; though various in its nature, being very often of the putrid, sometimes of the remittent kind, observing a tertian type, and at others of the inflammatory class; which may be distinguished by observing the symptoms peculiar to each of these kinds of fever. *W.*

* *Sometimes also the intestines are affected with, &c.* If the pain and thirst cease at once, the excrements be voided involun-

inflammation arising from the plentiful afflux of Chap. 3.
the hot and sharp matter to the affected parts. }

(10.) Moreover, at the decline of the disease, *aphthæ* frequently affect the internal parts of the mouth, especially when the patient has been kept very hot for a long time, and the evacuation of the peccant matter checked by astringents, the fuel of the disease not having been first carried off by cathartics; these *aphthæ* generally foreflew imminent death.

involuntarily, and have a fetid cadaverous smell, the pulse be small, and convulsions succeed, the intestines are judged to be affected with an incurable gangrene. A *delirium*, *aphthæ*, inflammation of the throat, a palsy of the whole *œsophagus*, coldness of the extremities, great anxiety, convulsions, and an hiccup, are esteemed mortal signs in this disease. It is dangerous in women in child-bed, and oftener destroys aged, and very young persons, than the middle aged. When it attacks cachectic, scorbutic, consumptive, or weak constitutions, and those who have suffered long under some disorder of mind; the case is generally desperate; and it threatens danger when the patient is troubled with worms. When it is accompanied with vomiting, and an hiccup succeeds, an inflammation of the stomach is to be apprehended. When the excrements are green, or black, and very fetid, and mixed with caruncles, the danger is imminent; for these signs denote an ulcer in the intestines. It is also an extremely bad sign if the glysters come away immediately after being injected, or the *anus* be so close that nothing can be thrown in; the former denoting a paralytic disorder of the intestines, especially of the *rectum*, and the latter a vehement spasmodic contraction of the same. It is proper to know that this disease sometimes proves mortal in a short time, namely, in *seven* or *eight* days, particularly if a malignant fever prevails; but sometimes it runs on to the *fortieth* day, and beyond it, and when it has continued a long time either destroys the patient, or though it goes off, leaves some troublesome disorder behind it, often terminating in a *dropsy*, *lientery*, the *COELIACA PASSIO*, and *incurable hectic*, or a *consumption*.

Sect. 4.

This disease
sometimes
ends in a
tenesmus.

Is gentle in
children,
though it
often de-
troys adults.

4. But if the patient survive the foregoing symptoms, and the disease prove lasting, the intestines at length seem to be affected successively downwards, till it be driven to the *rectum*, and ends in a *tenesmus*; upon which the natural stools, otherwise than in a dysentery, occasion great pain in the bowels, the *faeces* in their passage through them abrading the small guts; whereas the mucous stools only offend the *rectum* during the time that the matter is made, and discharged. But though this disease often proves mortal in grown persons, and especially in the aged, it is nevertheless very gentle in children, who have it sometimes for some months without any inconvenience, provided the cure of it be left to nature.

5. What similitude there is between the dysentery here described, and *the endemic dysentery of Ireland*,* I know not, having hitherto no ac-

* *The endemic dysentery in Ireland, &c.* This seems to be an error, according to Dr. MACBRIDE, who practised in that country, and says, The dysentery is a frequent disease, and was formerly held endemic in Ireland; but during the course of the present century, it does not appear to be more common in this kingdom than Great Britain. In all marshy countries the dysentery is apt to ensue after hot and dry summers; for in such situations, and during such weather, great store of putrid vapours is raised from the earth, and suspended in the higher parts of the atmosphere while the heat continues, but when the cold evenings of autumn come on, the miasmata fall down, and are productive of many diseases.

The dysentery is apt to be epidemic after seasons wherein the fruits of the earth have been spoiled, or not duly ripened; and when people have been obliged to make use of bread made of damaged corn, or bad flour, or to feed on half rotten flesh or fish; and it often arises, like malignant fevers, in close, dirty places, where great numbers of people are crowded together.—IV.

count of the latter. Neither have I discovered Chap. 3.
 how far this dysentery resembles those happen-
 ing in other years here in *England*. For, pos-
 sibly, there may be as many sorts of dysenteries There may perhaps be various kinds of dysenteries.
 as there are kinds of small pox, and other epi-
 demics peculiar to different constitutions, and
 which may therefore require a different method
 of cure in some particulars. Nor should this
 procedure of nature so much raise our wonder,
 since it is universally acknowledged, that the
 farther we penetrate into any of her works, the
 clearer proofs we have of the exceeding variety,
 and almost divine contrivance of her operations,
 which far surpass our comprehension. So that
 whoever has undertaken to fathom these mat-
 ters, and search into the multifarious operations
 of nature, will find himself disappointed in his
 expectation, and not succeed in the attempt;
 and, besides, if he be a judicious person, he
 will expect to be censured for making the most
 useful discoveries, for no other reason but be-
 cause he was the first inventor.

6. It must be farther observed, that all epi-
 demics, at their first appearance, as far as can All epidemics most subtle and spirituous at their rise.
 be judged from their symptoms, seem to be of
 a more spirituous and subtle nature, than when
 they become older; and that the more they de-
 cline, the more gross and humoural they daily
 grow; for whatever kind of particles those are,
 which, being intimately mixed with the air, are
 esteemed to produce an epidemic constitution,
 it is reasonable to conclude that they are pos-
 sessed of a greater power of acting at their first
 appearance, than when their energy is weakened.
 Thus in the infancy of the *plague* scarce a day
 passed, but some of those who were seized with
 it

Sect. 4. it died suddenly in the streets, without having had any previous sickness; whereas, after it had continued for some time, it destroyed none, unless a fever and other symptoms had preceded; whence it clearly follows, that this disease, though it then took off fewer persons, was more violent and acute in the beginning than afterwards, when its influence was more extensive.

Exemplified
in the *plague*.

And this
dysentery.

7. In the like manner in the dysentery under consideration, all the symptoms were most severe in the beginning, though, with respect to the numbers affected thereby, it increased daily till it came to its height, when consequently more persons died than in the beginning; yet the symptoms were more violent then, than in the height, and much more so than in the decline thereof, and, all circumstances being alike, abundance more perished. To this may be added, that the longer it continued, the more humoural it seemed to be; for instance, the first *autumn* it attacked, several had no stools at all; but with respect to the severeness of the gripings, the violence of the fever, sudden decay of strength, and other symptoms, it much exceeded the dysenteries of the following years. And farther, the dysentery accompanied with stools, which appeared first, seemed to be of a more spirituous and subtile nature than those that succeeded; for in the first dysentery the provocations to stool, and straining, were greater and more frequent, and the stools, especially the natural ones, less both in point of quantity and frequency. But generally as the disease proceeded on its course, the gripings abated, and the stools became more natural, and, at length, the epidemic constitution declining, the gripes were

were scarce felt, and the excrementitious or Chap. 3.
natural stools exceeded the mucous ones in }
number.

8. To proceed, at length, to the curative in-
dications: after having attentively considered the
various symptoms attending this disease, I dis-
covered it to be a *fever* of its own kind, turned
inwards upon the intestines; by means of which
the hot and sharp humours, that were contained
in, and agitated the blood, were thrown off by
the meseraic arteries upon these parts, whence
blood was discharged by stool, the mouths of
the vessels being opened by the impulse of the
blood and humours flowing thereto. And by
the violent and frequent efforts of the intestines
to discharge the sharp humours that continually
vellicate them, the *mucus*, wherewith their in-
side is naturally covered, is cast out more or less
copiously at every stool. *The indications of cure*,*
therefore, seem to offer themselves plainly; nor
indeed

The cura-
tive indi-
cations.

* *The curative indications, &c.* These seem to be; To
clear the primæ viæ of their contents as soon as possible,
and to take off the constriction of the colon; which are
done by purging, emetics, and opiates, judiciously admi-
nistered; but in order to prevent the mischiefs which may
arise from irritation in those who have an inflammatory
diathesis in the habit, bleeding should first be had recourse
to, and then gentle laxatives: for which purpose *tartar*
emetic managed so as to prove purgative, is recommended.
Vomits also are considered as a principal remedy, usefully
employed in the beginning, both with respect to the state
of the stomach and fever; but then they should be often
repeated, and made to pass also by stool, or otherwise they are
inefficacious. Glysters may also be conveniently given, as
they will assist the operation of the gentle purgatives where
necessary. If the gripings are frequent and very severe,
semicupia are useful, and *abdominal fomentations* applied for
some time; and *blisters* also on the lower belly, as they pro-
mise

Sect. 4. indeed have I judged that I had any thing more to do, than (1.) to make an immediate revulsion of these sharp humours by bleeding, and afterwards to cool the remainder; and (2.) to evacuate them by purgatives.

The method
of cure.

9. I therefore used the following method: upon being called in I immediately directed bleeding in the arm, and gave an opiate the same evening, and the next morning my usual gentle purging potion.

mise to be beneficial by assisting in taking off the constriction of the colon. As it may be presumed that acriminous matters are present constantly in the stomach and intestines, demulcents, particularly the oleaginous ones, may be properly employed; vegetable and aciescent food is the best in general; some portion of *cream* is often allowable, and *whcy* always proper: still, though in the beginning sweet and subacid fruits may be permitted, in the more advanced stages, on account of the prevalency of a morbid acid in the stomach, they should be administered with some reserve. When this disease is complicated with an inter-mittent fever, and is protracted from that circumstance chiefly, the Peruvian bark may be administered, but not in the earlier periods of the disease.—Thus far Dr. Cullen.

However, I have seldom seen, in cases which were curable, the method, as laid down by Dr. Akenfide in his *Commentarium de Dysenteria*, prove abortive; which consists in giving, after bleeding where necessary, and a vomit, small nauseating doses of ipecacuanha every four or six hours, with a cordial saline mixture. These generally promote a gentle diaphoresis, abate the constriction of the colon, and suffer the offensive matter to pass through the intestines without much trouble: after the bowels are cleared, and the pain greatly abated, opiates are useful; and some of the astringent class of medicines, particularly the cortex Eleutheriæ and lignum Campechense: the former of which is thought to be specific by some authors in this disease.

The vitrum antimonii ceratum has been highly extolled in dysentery, but on account of the extreme uncertainty in its operation has gone out of use; nevertheless, where the other remedies fail, it ought to be tried. *W.*

Take

Take of tamarinds, half an ounce; the leaves of ^{Chap. 3.}
seaa, two drams; *rhubarb*, one dram and a ^{A purging}
 half; boil them together in water sufficient to ^{draught.}
 leave three ounces of strained liquor, in which
 dissolve *manna* and *solutive syrup of roses*, of
 each an ounce: mix them together for a purg-
 ing potion, to be taken in the morning early.

I commonly prefer this draught to an electuary made with a small quantity of *rhubarb*; for though this root be exhibited to evacuate choler and acrimonious humours, yet unless a proper quantity of *manna* or *solutive syrup of roses* be mixed with it to quicken its operation, it avails little in curing a dysentery. And because it is certain that the gentlest purgatives do sometimes increase the gripings, and occasion a general depression and disorder of the spirits, by the adventitious commotion they raise in the blood and humours during their operation, I therefore commonly give an opiate earlier than is usual after purging, *viz.* at any hour in the afternoon, provided it seems to have done working, in order to quiet the disturbance I have raised. I repeat the purgative twice more, interposing a day between each potion, and exhibit an opiate after every purge, at the time above mentioned; and direct it to be repeated morning and night on the intermediate days, in order to diminish the violence of the symptoms, and obtain a respite whilst I am employed in evacuating the peccant humour. The opiate I chiefly used was liquid *laudanum*, in the quantity of sixteen or eighteen drops in any cordial water for a dose.

10. After

Sect. 4. 10. After bleeding and purging once I allowed some mild cardiac to be taken between whiles throughout the course of the disease, as *plague water, compound scordium water, and the like, e. gr.*

Cardiacs,
when to
be given.

A cordial
julap.

Take of the distilled waters of black cherries and strawberries, of each, three ounces; plague water, compound scordium water, and small cinnamon water, of each an ounce; prepared pearl, one dram and half; fine sugar enough to sweeten it, and half a dram of damask rose water to give it an agreeable taste: mix all together for a julap, of which let the patient take four or five spoonfuls, when faint, or at pleasure.

But I used these chiefly in aged and phlegmatic persons, in order to raise their spirits in some measure, which are much depressed in this disease by the violence of the stools. Their drink was *milk boiled with thrice its quantity of water, or the white decoction, as it is called, made of burnt hartshorn, and the crum of white bread, of each two ounces, boiled in three pints of water to two, and afterwards sweetened with a sufficient quantity of fine sugar; and sometimes posset drink, or, where the loss of spirits required it, they drank cold, for their common drink, a liquor made by boiling half a pint of canary, and a quart of spring water together. Their diet was sometimes panada, and sometimes* broth made of lean*

The proper
diet and
liquors.

* *Their diet was sometimes panada, &c.* Every thing should be drank warm, and, towards the conclusion of the disease, a glass of wine by itself, or mixed with water, as the stomach will bear it, is proper both to raise the spirits, and

lean mutton. I kept the aged more in bed, and allowed them a freer use of any cordial water they had been accustomed to, than was proper for children, or young persons. This method exceeded all those I had hitherto experienced in conquering this disease, which generally yielded to the third purge. Chap. 3.

II. *But if it proved so obstinate** as not to give way to this treatment, I gave the former opiate every morning and evening, till it went quite off; and the more effectually to conquer it, I have ventured to give a larger dose of *laudanum* than that above specified, *viz.* twenty-five drops every eight hours, if the former dose proved too weak to stop the flux. I likewise ordered a glyster made of *half a pint of milk, and an ounce and half of Venice treacle*, to be injected every day, which is indeed an admirable remedy in all kinds of loosenesses. Nor indeed have I hitherto found the least inconvenience from so frequent a repetition of opiates, (what ever mischief unexperienced persons groundlessly apprehend) though I have known several who have taken them every day, for some weeks running, when the disease proved inveterate.

How to be treated when it does not yield to these means.

and strengthen the stomach and bowels. The diet may be nourishing broths acidulated with lemon juice, sago, rice-gruel, or milk, mealy substances, falop, and the like.

* *But if it proved so obstinate, &c.* When the strength is much exhausted in a dysentery, or looseness, by the frequent discharges accompanying these distempers, the patient is cachectic and consumptive, a hectic heat, suffocation, grief, and wandering pains in the limbs succeeded, the evacuation is to be checked, strengthening glysters often injected, strengthening topics applied to the stomach and *abdomen*, and proper internals exhibited at the same time to strengthen all the parts.

But

Sect. 4. But it must be noted here, that when the flux amounts only to a simple looseness, omitting bleeding and strong purging, it will suffice to give *half a dram of rhubarb*, more or less in proportion to the strength of the patient, every morning, *made into a bolus, with a sufficient quantity of diascordium, adding to it two drops of oil of cinnamon*; and exhibiting an opiate the following evening, *e. gr.*

The cure of a looseness.

A pargoric draught.

Take of small cinnamon water, one ounce; liquid laudanum, fourteen drops: mix them together.

In the mean time use the diet above specified in the cure of the dysentery, and inject the glysters there commended every day, if there is occasion. —But this by way of digression.

An instance of the dysentery cured by this method.

12. Now to evince the excellence of the method here delivered by a single instance, for I will not trouble the reader unnecessarily with many: The Rev. Mr. *Belke*, chaplain to the Earl of *St. Albans*, being seized with a violent dysentery, during this constitution, sent for me to attend him, and was recovered by this method.

Children, how to be treated in this disease.

13. Children affected with this disease are to be treated in the same manner, but the quantity of blood to be taken away, and the doses both of the purgative and opiate, must be diminished in proportion to their age, so that, for instance, two drops of liquid *laudanum* is a sufficient dose for a child of a year old.

Our author's liquid laudanum described.

14. *The liquid laudanum* * which I constantly use, as above intimated, is prepared in the following simple manner:

Take

* *The liquid laudanum, &c:* Crude opium is much better than any of its preparations to be given, on account of the

Take of Spanish wine, one pint; opium, two ounces; saffron, one ounce; cinnamon and cloves reduced to powder, of each one dram; infuse them together in a bath heat for two or three days, till the tincture becomes of a due consistence, and after straining it off, set it by for use. Chap. 3.

I do not indeed judge that this preparation is to be preferred to the solid *laudanum* of the shops on account of its virtues, but I gave it the preference for its more convenient form, and the greater certainty of dosing it, as it may be dropt into wine, a distilled water, or any other liquor. And here I cannot help mentioning with gratitude the goodness of the Supreme Being, who has supplied afflicted mankind with opiates for their relief; no other remedy being equally powerful to overcome a great number of diseases, or to eradicate them effectually. And notwithstanding there are persons who endeavour to persuade the credulous, that almost all the virtues of opiates in general, and of opium in particular, chiefly depend on their artful preparation of them, yet whoever puts it to the test of experience, and uses the simple juice, as fre-

Its peculiar usefulness.

Opium as effectual as any of its preparations.

the opportunity of certainly ascertaining the dose; but as it sometimes is necessary to give it in a very small quantity, some of the liquid preparations are unavoidable; but they should be so formed, that they will dissolve the whole portion of the opium prescribed, and not suffer any deposition. Dr. Swan thinks opium dissolved in equal parts of wine and brandy, for this reason, the most eligible, which is certainly true; for a menstruum thus compounded is capable of keeping both the gummous and resinous parts in a state of solution, if properly proportioned, and hence a tincture of equal strength at all times will be obtained. *W.*

quently

Sect. 4. quently and as cautiously as any of its preparations, will certainly find very little difference between them, and be convinced, that the wonderful effects of opium are owing to the native goodness and excellency of the plant that affords it, and not to the dexterity of the artist. Moreover, *this medicine is so necessary an instrument in the hands* * of a skilful person, *that the art of physic would be defective and imperfect without it;*

* *This medicine is so necessary, that the art of physic, &c.* That this is a noble remedy in judicious hands, cannot be denied; but still, as in those of the unskilful it may and does occasion great mischief, we shall give a brief account of its actions, from whence all its effects, good and bad, may be understood:

Its powers are stimulant and sedative; from whence proceed the following effects—first, a frequency of pulse, after which the body is sensibly warmed, generally with a redness and flushing of the countenance; while these effects proceed, a serenity of mind ensues, and a lively imagination, which, when it occurs, is almost constantly of the cheerful and pleasurable kind; to these, in particular persons, often succeed chagrin, irritability, and irascibility; by the time that these become remarkable; the senses appear imperfect, the imagination false, and directly a delirium takes place and intoxication: the imperfection of the senses proceeds to a total want of sensibility, which ends in stupor and an appearance of sleep; under this sleep the pulse is pretty constantly full and frequent, though varying in different persons: during the sleep a sweat takes place, while the other secretions are sensibly diminished; after this the person is awakened, and if no other stimulus takes place, he is attended with a sense of coldness and weakness: such is the series of the phenomena, which plainly points out a mixture of stimulant and sedative. From which mixture the whole may be explained; but they will vary in different persons according to the dose: first, the stimulant power is exerted on the heart and larger vessels, whence the frequency of the pulse, heat, and flushing; next it is exerted on the sensorium commune; and here it must content us to say, and it may be demonstrated, that a free flow through

the

it; and whoever is thoroughly acquainted with Chap. 3.
 its virtues, and the manner of using it, will
 perform greater things than might reasonably be
 expected from the use of any single medicine.
 For it must certainly argue unskilfulness, and a
 very slender knowledge of its virtues, to under-
 stand only to apply it in order to procure sleep,
 ease pain, and check a looseness, since it may
 be suited to several other purposes, and is in-

the sensorium commune is always attended with serenity of
 mind, in opposition to chagrin, and that on the same free
 and equable flow depends the lively, the cheerful, and plea-
 surable imagination: these are the effects of the stimulant
 power, except such as proceed from it in a secondary
 way.

As the sedative power takes place, demonstrable changes
 follow, partly arising from the increased resistance in the
 sensorium commune, partly from the increased circulation,
 producing tone and irritation, partly from the imperfect
 sense and false imagination. It is difficult to give an ac-
 count of the reason of gaiety and fullness in different
 persons; and therefore it must be neglected. The seda-
 tive still mixing with the stimulant power, as in other cases,
 so here produces delirium, which here, beside the resist-
 ance given to the nervous power by the sedative, the sti-
 mulus still subsisting, is owing also partly to the false ima-
 gination. More directly owing to the sedative power are
 the stupor and sleep: during the sleep the fullness of the
 pulse is owing to the accumulation in the larger vessels, and
 the laxity induced in them, the frequency of the pulse to
 the stimulus of the opium still subsisting unobdured by the
 sedative power: the same sedative power weakens the powers
 of sense and voluntary motion by weakening the energy of
 the sensorium. The secretions are diminished from the
 distance, except sweat, which depends on increased circula-
 tion.

From the sedative power prevailing arise languor, cold-
 ness, weakness, and head ach; if the stimulant power pre-
 vail, recurrence of fever, inflammation, and pain, especi-
 ally if any other stimuli are urgent in the system.—Cul-
 len's *Materia Medica*, pag. 332. *W.*

Sect. 4.

An excellent cordial.

The dysentery in the beginning of this constitution, how best treated.

The method specified.

deed a most excellent cardiac, not to say the only one hitherto discovered.

15. The dysentery required in general to be treated in this manner: but it must be observed, that this dysentery was of a more spirituous and subtile nature the first year it arose, than that of the subsequent years, and therefore yielded less readily to purgatives, than to those medicines that diluted and cooled the blood, as well as the sharp humours separated from it into the intestinal duct. And therefore, during the first *autumn* wherein the dry gripes and dysentery prevailed, I always used the following method with success for both, till colder weather succeeded, when I found it less effectual, even in the same year; and in the following years, when the disease had lost much of its subtilty, and proved more humoural, it availed not at all.

16. I proceeded in this manner: if the patient was young and feverish, I directed bleeding in the arm, and an hour or two after a large quantity of liquor to be taken, by way of diluting, according to the method I practised in the *cholera morbus*, except that here, instead of chicken water, or posset drink, I substituted whey to be drank cold in the same quantity as in that disease, but ordered the glysters to be injected warm, without the addition of sugar, or any other ingredient. I always found the gripes and bloody stools go off upon the discharge of the fourth glyster. This business being over, and all the whey evacuated, which, if the patient be expeditious, takes up only two or three hours, he was immediately put to bed, where he soon fell into a spontaneous sweat (occasioned by the mixture of the whey with the blood)

blood) which I ordered to be continued for Chap. 3. twenty-four hours, but not at all provoked by medicine; allowing him nothing more than warm milk during this time, which he likewise used only for three or four days after he left his bed. If a relapse happens, either from rising too soon, or leaving off the milk diet too soon, the same process must be repeated. Now if this method be certain and speedy, no judicious person will reject it, because it does not come recommended with a pompous multiplicity of remedies.

17. That a fever, attended with such symptoms as we have enumerated above, happens in those countries, and at those times, wherein the dysentery prevails epidemically, and that the method of cure here delivered is agreeable thereto, is still further confirmed by the testimony of Dr. *Butler*, who accompanied his excellency *Henry Howard*, ambassador from his *Britannic Majesty* to the Emperor of *Morocco*, in *Africa*: this gentleman assured me, that the dysentery raged at that time epidemically in that kingdom; as it always does; and that the fever accompanying it resembled the fever above described, which he treated according to our method with constant success, both at *Tangiers* and other places, whether the patients were *Moors* or *Englishmen*. Now neither of us was obliged to the other for this method, but being at so vast a distance, we both casually fell upon the same. And he also informed me, that the method of diluting plentifully in the dysentery succeeded admirably in those parts; and indeed I conceive it reasonable that this method should be

Sect. 4. attended with greater success in that hot climate than in *England*.

An instance
of its use-
fulness.

18. In the first autumn wherein this constitution prevailed, Dr. Cox being seized with a very acute dysentery, by my advice followed the above-mentioned method, whereby he was safely and expeditiously cured; for after the discharge of the fourth glyster, at which time I happened to be with him, the gripes and bloody stools vanished, and there was occasion for nothing further to complete the cure, except keeping his bed for the time above specified, and using a milk diet. And this gentleman afterwards recovered several by the same method at the close of autumn; but the following year, making trial of it again, he found it fail him.

How to be
treated, when
it proves
lasting.

19. We have already taken notice, that when this disease runs on to a great length, it *often affects all the intestines gradually downwards,** till
at

* *It often gradually affects all the intestines downwards, &c.* It does not appear that this disease affects the intestines in this regular progression, gripings particularly about the navel, and tenesmus, are constantly the primary symptoms, which yielding, generally prove a termination to the disease: the last, however, will now and then continue troublesome for some time, from the abrasion of the mucus from the inner coat of the rectum, and upon that cause alone give great uneasiness at each evacuation, though they should be more feculent than dysenteric; in that case emollient fomentations are recommended to the anus, as well as vapours from decoctions of emollient and mucilaginous ingredients, starch glysters with opiates, &c. And should the intestines remain in a relaxed and weakened state from the foregoing indisposition, so that a diarrhœa is likely to continue from that cause, astringents and tonics may be now safely given, particularly the Columbo root, cortex Eleutheriæ, and logwood; which last, Dr. Swan says, may be advantageously used,

at length it fixes in the *rectum*, with a continual Chap. 3.
 inclination to go to stool, whereby only a *mucus* }
 tinged with blood is discharged. In this case,

used, when the distemper is accompanied with inflammation; but then it should be observed, when local inflammation depends more upon the weakness of the vessels of the parts affected, than on the increased circulatory powers, for in the latter case all astringents must do mischief. From what has been said relative to this disease, the cautions necessary to be observed in the management will be obvious; we shall therefore close the account with inserting the marks necessary to distinguish this from other complaints, with which it may now and then be confounded; these are *diarrhæa*, *cholera morbus*, *flux of the hæmorrhoids*, *hepatic flux*, and the *endemic diarrhæa* of Paris. *W.*

This disease differs from a *looseness*, (1.) by being attended with more violent gripings, and a discharge of bloody, purulent, putrid, and extremely fetid matters; whereas what is voided in a looseness is either serous, slimy, or bilious, but never bloody. From (2.) the *cholera morbus*, by its longer continuance, having no vomitings, unless in the beginning or state, occasioned sometimes by an inflammation of the stomach, being epidemic, and catching, and attended with a more painful *tenesmus*. From (3.) a *flux of the hæmorrhoids*, wherein pure blood is evacuated with advantage to health, by prevailing at a particular time of the year, being usually accompanied with a fever, and a voiding of blood, very seldom pure, but mixed with purulent, frothy, fetid matter, whence severe griping, and a very painful *tenesmus*: the evacuation not affording any relief, but on the contrary, highly weakening and dispiriting the patient. From (4.) an *hepatic flux*, where what is voided looks like the water wherein raw flesh has been washed, and comes away without pain, by the very different appearance of the discharges, the violent gripings attending them, the presence of a fever, and other bad symptoms. From (5.) that disorder, consisting in frequent evacuations by stool, at first mucous, and afterwards tinged with blood, which is *endemic* at *Paris*, and seizes almost all foreigners, by being much more malignant, and likewise catching, accompanied with a fever, and occasioning a far greater loss of strength and spirits. HOFFMAN.

Sect. 4.

I conceive it would be useles to attempt the cure, either (1.) by any of the above-mentioned methods; (2.) by *detergent*, *agglutinant*, or *astringent* glysters, which are ordinarily injected according to the different states of the supposed ulcer; or (3.) by *fomentations*, *baths*, *fumigations*, and *suppositories*, suited to the same purposes. For it is apparent that this disorder does not proceed from an ulcer of the *rectum*, but rather from this, that in proportion as the intestines recover their tone, they deposit the remains of the morbific matter in this gut, which being continually irritated thereby discharges part of the mucous matter at every stool where-with the inside of the intestines is naturally covered. For this reason the part affected must be strengthened to expel the small remains of the morbific matter, as the other intestines have already done: and this purpose is only answered by such medicines as strengthen the body in general; for the application of any kind of topic to the part affected, being incommodious, will rather debilitate than strengthen it. The disease therefore must be borne till the strength can be recovered by a restorative diet, and the free use of some particularly grateful cordial liquor; and then the tenesmus will go off spontaneously in the same degree as the strength returns.

Topics, why
not to be
applied.

It sometimes
continues for
several years.

20. It sometimes happens, though very seldom, that a dysentery ill treated in the beginning afflicts a particular person for several years, the whole mass of blood having obtained a kind of dysenteric disposition, whence the bowels are continually supplied with hot and acrimonious humours, whilst the patient in the mean time
con-

continues pretty capable of following his business. I met with an instance of this lately in a woman who was perpetually afflicted with this disease during the three last years of this constitution; and as she had tried abundance of medicines before applying to me, omitting other remedies, I only directed bleeding, and was encouraged to repeat it frequently at considerable intervals, as well from the colour of the blood, which resembled that of pleuritics, as from the great relief the patient obtained by every bleeding; by which means she at length recovered her former health.

21. Before I finish this particular is to be remarked, *viz.* that though in those years wherein the dysentery raged so epidemically, the above-mentioned evacuations were absolutely necessary to be made before having recourse to *laudanum*, yet in any constitution, which has a less tendency to this disease, they may safely be omitted, and the cure completed by the shorter method, namely, by exhibiting *laudanum* alone in the manner already delivered. And let this suffice for the dysentery.

When not epidemic, yields to *laudanum* only.

C H A P. IV.

Of the continued Fever of Part of the Year 1669, and the Years 1670, 1671, 1672.

1. **A**T the same time the *dysentery* raged a *fever* Origin of the fever of this constitution. arose, which much resembled,* and often accompanied this disease: it not only attacked such

* *A fever arose, which much resembled, &c.* SAUVAGES has classed this as a species of *synochus*, and named it, *synochus*

Sect. 4. such as were afflicted with the dysentery, but those likewise who remained wholly free from it, unless that sometimes, though very rarely, the patient had slight gripings, sometimes with and at other times without a looseness; for it always had the same apparent causes with the dysentery, and was attended also with the same symptoms as the fevers of those who had the dysentery; so that if we except the evacuation by stool in the dysentery, and the symptoms thereon necessarily depending, this fever should seem to be wholly of the same nature with that disease. And from henceforward, through the course of this constitution, it underwent the same change of symptoms with respect to its increase, state, and declension, as generally happened in the dysentery; I call it, therefore, the *dysenteric fever*.

Its symptoms.

2. This fever, as we have said, sometimes began (1.) with mild gripings, especially in the first years of its appearance, or they came on afterwards, but frequently none at all attended; (2.) the sweats, which, as we observed above, were very copious in the fever of the preceding

noctus dysenteroides.—Though Dr. Cullen approves not of the classification, and very rightly; for it by no means answers to the definition of that species of fever. From the season in which it became epidemic, the symptoms, and from its termination, it appears to derive its origin from the same contagious miasmata as the dysentery, and differs from it only in not being attended with the same intestinal evacuation, but the morbid miasmata affecting the system in general;—and here we cannot avoid paying the tribute of praise due to the acuteness of our author's sagacity, who happily discovered the similarity of appearances, so as to lead him to this simple and certain mode of cure, in imitating nature so admirably and so successfully. *W.*

constitution, were unfrequent and moderate in this ; but (3.) the pain in the head was more violent here ; (4.) the tongue, though it was white and moist as in the other fever, was covered beside with a thick fur ; (5.) this fever seldom went off by spitting, as the other usually did ; (6.) it was more subject to generate *aphthæ* in the declension, than either the former, or any other fever I had hitherto met with : for both this and the fever that succeeded the dysentery, in the decline, generally deposited a vitiated and acrid matter in the mouth and throat, whence this symptom arose in such as had been much exhausted by the inveteracy of the disease, and further debilitated by an over-hot regimen. In the same manner also were those *aphthæ* generated, which happened at any time in stubborn dysenteries, joined with a fever ; especially if, besides using an hot regimen, the discharge by stools had been stopped by astringents, before the cause or fuel of the disease was expelled the veins by bleeding and purging.

3. These were the most certain signs of this fever, for the other symptoms varied every year according to the manifest qualities of the air, at certain times, and also according to the progress and different states of the dysentery. But that these particulars may be better understood, since by this contrivance especially nature manifests her superior power in the production of epidemic diseases, we shall make a closer scrutiny into this matter. It should therefore be observed that, though the manifest qualities of the air may not make so strong an impression upon a particular constitution, as to be the productive causes of the epidemic diseases which are properly

Epidemics,
how affected
by the ma-
nifest quali-
ties of the
air.

Sect. 4. perly referred thereto; as these arise from some latent and inexplicable disposition thereof, yet they have a power over them for a time, and hence epidemics are admitted or excluded, as the manifest qualities of the air favour or oppose them. But the universal constitution remains precisely the same, whether these promote, or in some measure retard it.

4. Hence also it is, that when various epidemics happen in the same constitution, some particular disease shews itself chiefly in the season assigned it by the sensible qualities of the air; and at length yields to some other epidemic, which the different qualities of the subsequent season occasion. Hence it happens that the stationary fever, belonging to the epidemic of that year, of whatever kind it be, rages most violently in *July*, at the beginning whereof it attacks abundance of persons at once, but upon the approach of *autumn* abates considerably, and yields to the then reigning grand epidemic, which gives its name to the year; as every year sufficiently shews. For the body being heated by the preceding summer, the fevers, which are peculiar to the general constitution, easily attack at that time, but upon the coming in of *autumn* the grand epidemic again prevails, and these go off entirely.

5. But as the fevers arising in this month should be referred to the sensible qualities of the air, so also the various symptoms, which are quite foreign to their nature, in as much as they depend upon such a general constitution, are derived from the manifest qualities of the air happening in the same month. Hence it is that in those years wherein these fevers seize abundance of

of persons in this month, they are attended with a variety of new symptoms, besides those which are peculiar to them as they proceed from the general constitution; and yet they still continue the same, though by the unskilful they are esteemed every year as new fevers, on account of the diversity of their concomitants. But these more peculiar symptoms continue only a few weeks, and the remaining part of the year only the proper symptoms appear; which accompany them as *stationary* fevers of such a particular constitution. Chap. 4.

6. This clearly appeared in other fevers, but chiefly in this dysenteric fever of *July* 1671 and 1672; the former of which at the decline was constantly attended with extreme sickness, a vomiting of green choler, and a great tendency to a looseness; and the latter with a pain in the muscular parts of the body, especially in the limbs, resembling a rheumatism, and also an inflammation of the throat, but milder than in a quinsy: yet both these met in the same specific fever, and both required the same treatment, for they differed only with respect to the sensible qualities of the air that prevailed at the time when these symptoms arose. But the sudden and unexpected rise of these fevers about the beginning of this month, and the new appearance of their peculiar symptoms for a time, though they neither differed in kind, nor in the method of cure required, for the fever that run through the whole year: these particulars, I say clearly shews how difficult it is universally to ascertain the species of a fever from its concomitant sign; though it may be sufficiently known by carefully attending to other diseases arising in the same year, Instanced in the dysenteric fever.

The species of a fever, how best discoverable.

Sect. 4. year, and also to the peculiar symptoms of evacuation. A consideration likewise of the method or medicines to which it readily yields, greatly conduces towards discovering the species of the fever.

7. As to the other differences of the concomitant symptoms of *stationary* fevers they only regard the different times of the constitution; and upon this account are either violent or moderate as the symptoms of other epidemics, to which they belong, are either increased or mitigated.

8. But to resume our subject; this fever, which, as we have already observed, begun with the dysentery, prevailed equally with it, except that it went off for a little time, whilst the other epidemics of these years prevailed; yet it continued throughout this constitution, sometimes attacking more, and at others fewer persons.

The cure of
the fever of
this constitution.

9. With respect to the cure of this fever; having observed, as we said before, that the symptoms of that fever which affected abundance of those who had the dysentery, were manifestly the same with those which accompanied the solitary fevers of the current year, I judge it proper to attempt the cure by imitating in some measure the evacuation, which nature commonly uses in order to expel the sharp and corrosive matter, occasioning both the dysentery and the fever succeeding thereupon. And therefore I endeavour to cure this fever by the same method, both as to bleeding and repeated purging, which we have deduced more at large in treating of the cure of the dysentery; only I found that opiates, exhibited on the intermediate days, not only did no service, but proved detrimental, by detaining the matter which ought to have been dis-

discharged by purging, which happened otherwise in the dysentery. On the first days of the illness the patient lived on water gruel, barley broth, panada, and the like for diet, and drank warm small beer for his common drink; but after purging once or twice, it was needless to forbid chicken and the like food of easy digestion; as this method of cure by purging indulges the use of those things, which cannot be allowed if a different one be practised. The third purge, interposing a day between each, generally terminate the disease, but sometimes further purging was required. When the patient continued weak after the fever was gone off, and recovered slowly, which often happened in hysterical women, I endeavoured to strengthen them and repair the loss of spirits by giving a small dose of *laudanum*; but I seldom repeated this medicine, and never prescribed it till two or three days after the last purge. But nothing proved so effectual to recover the strength, and cheer the spirits, as the free use of the air immediately after the fever vanished.

10. I received the first hint of this method of practice from the following case: In the beginning of this constitution, whilst I was solicitously endeavouring to discover the nature of this new fever, I was called to a young woman who was seized therewith, and had also a very violent pain in the forepart of the head. and the other symptoms, which, as we said, accompanied the dysenteric fever. Upon inquiring in what manner, and when the fever first seized her, she told me that she had the epidemic dysentery a fortnight before, which prevailed very generally at that time, and that as soon

Whence derived.

as

Sect. 4. as it went off, either spontaneously, or by the use of medicine, this fever with the pain in the head succeeded. Hence I conceived it would be proper, for both, to substitute another similar evacuation in place of the dysentery, upon the stoppage of which the fever arose; and accordingly procured it by the method above recommended, to which indeed the fevers of this constitution readily yielded. For I was ever of opinion that success alone is not sufficient proof of the excellency of a method of cure in acute diseases; since some are recovered by the imprudent procedure of unskilful women, but that there was further required, that the distemper should be so easily conquered, and yield, as it were, conformably to its own nature.—But this by the way.

11. In 1672, at the beginning of June, I was sent for by the Earl of *Salisbury*, who had this fever, accompanied with gripings and costiveness; and he was recovered by the method proposed, which was the only one I had occasion for whilst this fever continued.

A stupor in this fever, how caused.

12. In young persons, and sometimes in those who were a little more advanced in years, this fever at times seized the head, so that they became delirious, yet without raving, as those who grow light-headed in other fevers do; *but were affected with a kind of stupor, nearly resembling a carus.** This symptom chiefly happened in such

as

* *But were affected with a kind of stupor, &c.* Might not we be allowed to suppose, that in these cases the morbid miasmata had taken possession of the brain, instead of flowing to the intestines, and thus produced their fatal effects? As our author confesses himself always unsuccessful with

as unadvisedly exerted their utmost endeavours Chap. 5.
 to promote sweat at the beginning of the dis-
 ease. I was not so happy at that time as to be
 able to relieve such as were attacked with this
 symptom, though I left no method untried, and
 had recourse to all the medicines hitherto noted
 for this purpose. And let these particulars suf-
 fice for the fever of this constitution.

C H A P. V.

Of the Measles of 1670.

1. **I**N the beginning of *January, 1670, the* The rise and
progress of
the measles
of this con-
stitution.
measles * appeared as is usual, and increased
 daily till the approach of the vernal *equinox,*
 when

with patients thus affected, though he left no known means untried, it is to be lamented, that he has not informed us what were the means of which he made use; probably he tried the cooling regimen to excess, as he found this symptom chiefly arose in those on whom practitioners had exerted their utmost efforts to produce a sweat in the beginning of the disease. Dr. Swan conjectures, that as the use of blistering was not established in our author's time, and that he rarely administered medicines of the warm and volatile kind, that these were not applied so freely as they ought, or were entirely omitted; and hence attempts to account for the want of success. Nor is it at all improbable; for in cases of stupor there is generally a torpor of the nervous system, which requires rousing by powerful stimulants, such as blisters, volatile cordials, and nervous medicines, the application of which in the present practice often proves favourable to our wishes.—I have often seen this symptom removed by the application of blisters to the legs, warming cataplasms, and sinapisms to the feet, and the use of musk, camphor, and volatile salts given internally at the same time. *W.*

* *The measles appeared, &c.* This disease, so accurately described by our author, is the true inflammatory species,
2
perfectly

Sect. 4. when it came to its height; after which it abated in the same gradual manner, and went quite off in *July* following. I intend to deliver an accurate history of this sort, so far as I was then enabled to observe it, because it seemed to be the most perfect in its kind of all those I have hitherto met with.

Its symptoms enumerated.

2. This disease arises and terminates at the times above specified. It chiefly attacks children, and especially all those who live under the same roof. (1.) It comes on with a chillness, shivering, and an inequality of heat and cold,

perfectly agreeing with the description of Dr. Cullen, who says, this disease

Is a contagious synocha or inflammatory fever, attended with sneezing, epiphora, and a dry, hoarse cough; on the fourth day, or a little later, small eruptions crowding together break out, scarce appearing above the skin, and after three days running into small scales like bran: it is divided into two kinds, the

FIRST, called *rubeola vulgaris*, where very small, confluent, corymbose papulæ arise scarce perceptible above the skin; of which there are three varieties,

The *first*, where the disease is attended with more severe symptoms, and runs through its course more irregularly.

The *second*, where an angina accompanies it; and

The *third*, where it has, as observed by Dr. Watson, a putrid diathesis for its associate.

The SECOND, from Sauvages, called *rubeola variolodes*, is accompanied with distinct papulæ more prominent than the former above the skin.—Though Cullen doubts whether this can properly be referred to this place; not only because it greatly differs in the form of the papulæ, but, what appears of greater moment, it is for the most part free from the catarrhal symptoms so peculiar to the measles.—*Synopsis Nosologiae Method.* vol. ii. pag. 136, 137. It is, however, the first, or the *morbilli regulares*, of which our author here treats, and is a disease arising from contagion sui generis, never affecting the same persons twice during their lives.—*ff.*

which

which succeeded alternately during the first day; Chap. 5.
 (2.) the second day these terminate in a perfect
 fever, attended with (3.) vehement sickness;
 (4.) thirst; (5.) loss of appetite; (6.) the
 tongue white, but not dry; (7.) a slight cough;
 (8.) heaviness of the head and eyes, with conti-
 nual drowsiness; (9.) an humour also generally
 distils from the nose and eyes, and this effusion
 of tears is a most certain sign of the approach of
 the measles; whereto must be added, as a no less
 certain sign, (10.) that though this disease mostly
 shews itself in the face, by a kind of eruptions,
 yet, instead of these, large red spots, not rising
 above the surface of the skin, rather appear in
 the breast; (11.) the patient sneezes as if he had
 taken cold; (12.) the eyelids swell a little be-
 fore the eruption; (13.) he vomits; (14.) but
 is more frequently affected with a looseness, at-
 tended with greenish stools: but this happens
 chiefly in children during dentition, who are
 also more fretful in this distemper than ordi-
 nary. The symptoms usually grow more vio-
 lent till the *fourth* day, at which time generally
 little red spots, like flea-bites, begin to appear
 in the forehead and other parts of the face, which
 being increased in number and bigness, run to-
 gether, and form large red spots in the face, of
 different figures; but sometimes the eruption is
 deferred till the *fifth* day. These red spots are
 composed of small red pimples, seated near each
 other, and rising a little higher than the surface
 of the skin, so that they may be felt upon pres-
 sing them lightly with the finger, though they
 can scarce be seen. From the face, where only
 they first appear, these spots extend by degrees
 to the breast, belly, thighs, and legs; but they
 affect

They grow
 more violent
 till the
 fourth day.

Sect. 4. affect the trunk and limbs with a redness only, without perceptibly rising above the skin.

And do not abate upon the eruption.

3. The symptoms do not abate here upon the eruptions, as in the small pox; yet I never found the vomiting continue afterwards, but the cough and fever grow more violent, the difficulty of breathing, the weakness of, and defluxion upon the eyes, constant drowsiness, and loss of appetite, persisting in their former state. On the *sixth* day, or thereabouts, the eruptions begin to dry, and the skin separates, whence the forehead and face grow rough, but in the other parts of the body the spots appear very large and red. About the *eighth* day those in the face vanish, and very few appear in the rest of the body; but on the *ninth* day they disappear entirely, and the face, limbs, and sometimes the whole body, seem as if they were sprinkled over with bran, the particles of the broken skin being raised up a little, and scarce cohering, so that as the disease is going off, they fall from all parts of the body like scales.

The disease usually terminates on the 8th day.

4. The measles therefore generally disappear on the *eighth* day,* when the vulgar, deceived by

* On the eighth day, &c. Dr. Swan seems to accuse our author of a contradiction in this place; for, says he, we are told that the measles generally disappear on the eighth day, and just above, that the eruptions disappear entirely on the ninth. In examining the Latin edition I find no such contradiction: Sydenham's words above this place are, OCTAVO circiter die maculae in facie evanescent, & vix in reliquo corpore cernuntur; NONO vero nullae sunt prorsus, facie atque artubus quandoque & toto corpore quasi farina conspersis, &c.—And here, evanescent itaque morbilli die fere OCTAVO. By which we are to understand, that the measles disappear on the eighth day, or thereabouts, and on the ninth the desquamation takes place, the eruption having previously vanished.

by the term of the duration of the small pox, affirm, that the eruptions are struck in; though in reality they have run through the course assigned them by nature, and they suspect that the symptoms which succeed upon their going off, are occasioned by their striking in too soon. For it is observable that the fever and difficulty of breathing increase at this time, and the cough becomes more troublesome, so that the patient can get no rest in the day, and very little in the night. Children chiefly are subject to this bad symptom, which comes on at the declension of the disease, especially if an heating regimen, or hot medicines have been used to promote the eruption; whence arises a peripneumony, which destroys greater numbers than the small pox or any of its concomitant symptoms; yet notwithstanding, if this disease be skilfully treated, it is in no ways dangerous. These bad symptoms are likewise often followed by a looseness, which either immediately succeeds the dis-

Chap. 5.

vanished. Nor does it appear to me clear, that there is any difference between our author and Dr. Swan with respect to the time of the measles going off; though, from the Doctor's mode of expression, it strikes us as if he thought Sydenham wrong; for he says, "but the truth is, that the eruptions vanish in four or six days from the first appearance in most subjects." Sydenham is of the same opinion; he reckons from the beginning of the disease; Dr. Swan from the appearance of the eruption; and the eighth day, or thereabouts, is certainly the time of the disappearance of the eruption generally allowed.—Dr. Cullen says, "the eruption generally appears on the fourth day; on the face the eruption retains its redness, or has increased for two days, and in a day or two more the eruption entirely disappears, while a mealy desquamation takes place."—*Practice of Physic.*—*W.*

Sect. 4. case, or continues several weeks after the disease and all its symptoms are gone off, with great danger to the patient, by reason of the continual waste of spirits hence arising. And sometimes also, after using an exceeding hot regimen, the eruptions turn livid, and then black; but this happens only in grown persons, who are irrecoverably lost upon the first appearance of the blackness, unless they be immediately relieved by bleeding and a cooler regimen.

Requires nearly the same method of cure with the small pox.

The method described.

5. As the measles in its nature nearly resembles the small pox, so does it likewise agree pretty much therewith in the method of cure which it requires: hot medicines and a hot regimen are very dangerous; though they are frequently used by unskilful nurses to drive the disease from the heart. The following method succeeded best with me. I confined the patient to his bed for only two or three days after the eruption, that the blood might gently breathe out the inflamed and noxious particles, that are easily separable, through the pores, in a manner suitable to the nature of the disease; and allowed no more clothes nor a larger fire than he accustomed himself to when in health. I forbid all flesh meats, and permitted water gruel, barley broth, and the like, and sometimes a roast apple, for diet; and for drink, either small beer, or milk boiled with thrice its quantity of water. To relieve the cough, which almost always attends this disease, I ordered a draught of some *pectoral decoction* to be taken between whiles, with a proper *linctus*. But I chiefly observed to give *diacodium* every night, the distemper throughout, *e. gr.*

Take

Take of the pectoral decoction, a pint and half; Chap. 5.
 syrup of violets and maiden-hair, each an A pectoral
 ounce and half; mix them together for an apo- apozem.
 zem, to be taken in the quantity of three or four
 ounces, three or four times a day.

Take of oil of sweet almonds, two ounces; syrup A pectoral
 of violets and maiden-hair, each an ounce; fine linctus.
 sugar enough to make them into a linctus, to be
 taken often in a small quantity, especially when
 the cough is troublesome.

Take of black-cherry water, three ounces; syrup A quieting
 of white poppies, an ounce: mix them toge- draught.
 ther for a draught, to be taken every night.

In children the dose of the pectorals and opiate
 must be diminished in proportion to their age.

6. *This method seldom fails of curing,** besides Its excel-
 being preventive of every other symptom, which lence.
is

* *This method seldom fails of curing, &c.* It is rather
 surprizing, that Sydenham should not order bleeding in the
 beginning or height of the disease, seeing that the inflam-
 matory symptoms often run very high in these stages; nor
 assigned any reason why he omitted it, as it was an applica-
 tion of which he has shewn, in various instances, he was so
 very fond. Dr. Mead advises it even before the coming out
 of the pustules, or when they are come out; and at the
 height, in order to prevent any inflammation affecting the
 lungs. Dr. CULLEN says, it may be employed at any time
 in the course of the disease, or after its ordinary course is
 finished, and that more or less, according to the urgency
 of the symptoms of fever, cough, and dyspnœa: but as
 symptoms of pneumonic inflammation seldom come on du-
 ring the eruptive fever; and as this fever is sometimes vio-
 lent immediately before the eruption, though a sufficiently
 mild disease be to follow, so bleeding is seldom very neces-
 sary during the eruptive fever, and may often be reserved
 for the periods of greater danger, which are perhaps to
 ensue. Notwithstanding which, in all cases of measles,
 where there are no marks of putrescency, and where there

Sect. 4. is not the necessary and unavoidable attendant of the disease: the cough is the most troublesome one, which, however, is nothing dangerous till the disease be gone off; after which, if it should continue a week or a fortnight, it may be easily cured by the use of the open air, along with proper pectorals; and indeed it generally abates by degrees spontaneously,* and at length ceases.

7. But,

is no reason from the known nature of the epidemic, to apprehend putrescency, bleeding is the remedy to be depended upon: but assistance may be obtained from cooling purgatives, and particularly from blistering on the sides and between the shoulders.—*Practice of Physic.*

Demulcent, oily, mucilaginous, or sweet pectorals are recommended for the dry cough, to which the addition of nitre will be useful, which should be gradually swallowed; as more benefit is derived from their sheathing the fauces, than becoming any way corrective of acrimony.

In the exhibition of opiates, our author seems not to have been cautious enough, for there are many circumstances occurring in this disease, wherein they may be hurtful. If the inflammatory diathesis should be greatly prevalent, the febrile symptoms, and constant difficulty of breathing, indicate an inflammation of the lungs existing; opiates, from their known power of heating the system, and acting as stimulants on the heart and larger vessels, must be improper; but at the latter end of the disease, when no such symptoms appear in a state of any violence, they may be serviceable in quieting the cough, and procuring rest. In the case of looseness, LASSONE's method, as before specified when treating on the small pox, may be had recourse to. *W.*

* *And indeed it generally abates spontaneously by degrees, &c.* This symptom, or rather remnant, is often too dangerous to be left entirely to itself; for, from neglect it has often terminated in consumption: and indeed for want of purging, of which our author has taken no notice, other mischiefs are apt to ensue. Purgings, indeed, and that repeatedly, after the desquamation is finished, has been thought by most physicians essentially necessary, in order to draw off any remains of morbid matter which may be left in the habit:—whilst some, though they think it equally adviseable, consider

7. But, if by using cardiacs and too hot a regimen after the departure of the disease, the patient's life be endangered (which is a very common thing) by the violent fever, difficulty of breathing, and other symptoms that usually afflict such as have a peripneumony, I have with great success ordered even the tenderest infants to be blooded in the arm, in such quantity as their age and strength indicated. And sometimes also, when the disease has been urgent, I have not feared to repeat the operation; and in reality, by bleeding, I have snatched abundance of children from imminent death. This disorder attacks children upon the departure of the measles, and proves so fatal, that it may justly be esteemed one of the principal ministers of death, destroying greater numbers than the small pox: nor have I hitherto discovered any other certain method of conquering it. Bleeding also cures the looseness, which, as we said, succeeds the measles; for as it arises from the *effluvia* of the inflamed blood, flowing into the intestines (as is likewise usual in the pleurisy, peripneumony, and other diseases caused by inflammation) and irritating them to discharge their contents, this remedy alone will relieve; as it makes a revulsion of those sharp humours, and likewise reduces the blood to a due temper.

Chap. 5.
The mischief ensuing from a hot regimen and cardiacs after the disease is gone off, how remedied.

consider its utility as taking off the inflammatory diathesis which had been brought on in the system by the preceding malady; and hence prefer bleeding, proportioned to the apparent symptoms. After these, asses milk, gentle exercise, and country air, will speedily, under proper management, give strength to the constitution, and again restore the patient to a state of health. *W.*

Sect. 4.
 Bleeding,
 as safe in
 children as
 in adults.

8. Nor need any one be surpris'd at my bleeding young children, since, as far as I have hitherto been able to observe, it may be as safely performed in them as in grown persons. And indeed it is so necessary in the peripneumonic fever above mentioned, and in some other disorders to which children are subject, that there is no curing them without it. For instance: how are children to be relieved without bleeding during dentition, in the convulsions happening to them in the ninth or tenth month, accompanied with a swelling and pain in the gums, whence the nerves are compressed and irritated, and the fits also proceed? In this case bleeding only is vastly preferable to all the celebrated specifics yet known; some of which prove detrimental by their adventitious heat, and whilst they are supposed to cure the disorder by some occult quality, increase it by their manifest heat, and destroy the patient. Not to mention at present the great relief which bleeding affords in the *hooping cough* in children, in which it far exceeds all kinds of pectorals.

A case related where-
 in it did
 service.

9. What has been said of the cure of those disorders which immediately succeed the measles, may sometimes also hold good when the disease is at the height, provided the symptoms be occasioned by an artificial heat; if I may be allowed to use the expression. In 1670 I attended a maid-servant of Lady *Anne Barrington*, who had the measles, joined with a fever, difficulty of breathing, purple spots over the whole body, and many other dangerous symptoms, all which I ascribed to the hot regimen and medicines which had been too freely used. I directed bleeding in the arm, and prescribed a cooling pectoral

pectoral ptifan to be taken often, by means of Chap. 6.
 which, and a more cooling regimen, the purple spots and all the other symptoms went off by degrees.

10. This disease, as above mentioned, began in *January*, and increased daily till the approach of the vernal equinox, after which it decreased gradually, and totally disappeared in *July* following, without returning again during the course of the years wherein this constitution prevailed, except that in the following spring it appeared in a very few places. And let this suffice for the measles.

C H A P. VI.

*Of the anomalous or irregular Small Pox of the
 Years 1670, 1671, and 1672.*

1. **T**HE measles, as we said before, introduced a different sort of *small pox* from that of the preceding constitution. It arose much about the same time as the measles did, namely, in the beginning of *January*, 1670; and though it was not so epidemic, it notwithstanding accompanied that disease whilst it prevailed, and continued after it went off, as long as this constitution lasted. Nevertheless it yielded to the dysentery which raged in autumn; a season peculiarly disposed to favour it: but in the winter this kind of small pox returned again, the dysentery being overcome by the cold, which is an enemy to it. In this order did these distempers succeed each other through the whole term of years of this constitution, except that in the last

The rise and progress of a new kind of small pox.

Sect. 4. last *autumn* it prevailed, namely, in 1672, the constitution being then in its decline, and slowly promoting the dysentery, which at that time was also declining. The small pox, contrary to custom, raged also at the same time, and prevailed so equally with the dysentery, that it was not easy to ascertain which of the two diseases attacked greater numbers, but, as far as I could conjecture, the dysentery should seem to have been chiefly prevalent. Moreover, this sort of small pox also, like other epidemics, was very violent in the beginning, and increased daily till it came to the height, after which it decreased by degrees, both with respect to the violence of the symptoms, and the numbers attacked thereby.

2. But to set down its particular signs. I was much surpris'd upon the rise of this small pox, when I found that it differed in several considerable symptoms from the kind produced by the preceding constitution, which I had formerly observed with particular attention. At present I shall only treat of the symptoms that differ from those of the other kinds, without taking notice of those it had in common with that sort of small pox so fully described in the foregoing sheets.

The signs of
the distinct
kind.

3. The distinct kind of this small pox differed from the common distinct one of the preceding constitution, only in the following symptoms: (1.) The eruptions generally came out on the *third* day, which indeed is usual in the confluent sort, whereas in the distinct kind of the former constitution they appeared not before the *fourth* day; (2.) they did not grow so big in the course of the disease as those of that kind, but

but (3.) were more inflamed, and in the declension, after the suppuration, frequently looked black; (4.) sometimes, but very rarely, a spitting happened, as in the confluent kind, though the eruptions were very few: whence it appears that the small pox of this constitution greatly resembled the confluent kind, and was attended with a more violent inflammation than is usual in the distinct. Chap. 6.

4. But the confluent sort of this constitution differed from those I had observed in other years in several particulars, which I shall here enumerate. (1.) The eruptions sometimes appeared on the *second* day, at others on the *third*, in form of an uniform reddish swelling, covering the whole face, and thicker than an *erysipelas*, nor could any spaces be easily perceived between the eruptions; (2.) the rest of the body appeared to be overspread with an almost infinite number of red, inflamed pustules, joined together in one; (3.) in the intermediate spaces whereof, especially in the thighs, little bladders arose, like those occasioned by burns, full of limpid *serum*, which ran plentifully from them, upon the bursting of the skin; the flesh underneath appearing black, and as if it were gangrened. But this dreadful symptom happened very rarely, and only in the first month wherein this kind prevailed. The signs of
the confluent
kind.

5. Amongst the rest who were thus grievously affected at this time, I was sent for, in the beginning of *January*, 1670, by Mr. *Collins*, a brewer, in *St. Giles's* parish, to his son, an infant, who had bladders on his thighs as large as a walnut, and full of a transparent *serum*, which afterwards bursting, the flesh underneath appeared

Sect. 4. } peared as it were quite mortified, and he died soon after; as did all those I had seen attacked with this dreadful symptom.

6. (4.) About the *eleventh* day a white shining pellicle extended itself over the reddish swelling in several parts of the face, and by degrees over the whole; (5.) soon after it discharged a shining crusty matter, not indeed of a yellow or brown colour (both which were observable in the other kind of small pox) but of a deep red, like congealed blood, which, as the pustules ripened, grew every day blacker, till at length the whole face appeared as black as soot: (6.) and whereas in the other kind of confluent small pox the patient was in the most danger on the *eleventh* day, which put an end to the lives of the greatest part of those that died; in this sort, unless an extreme hot regimen destroyed him in a shorter time, he generally lived till the *fourteenth*, and sometimes to the *seventeenth* day, after which the danger was over. (7.) But it must be noted, that those who had the fatal bladders with the mortification, which happened to some in the first month wherein this kind arose, as above related, died in a few days after the eruption.

7. (8.) The fever and all the other symptoms, which either proceeded or accompanied this sort of the small pox, were more violent than in the foregoing kind, and it had manifest signs of greater inflammation; (9.) the patient was more subject to a spitting; (10.) the pustules were considerably more inflamed, and much smaller, so that it was difficult upon their first appearance to distinguish them from an *erysipelas*, or the *measles*, unless that the latter certainly manifested itself by the day of the eruption, and other

other symptoms, above mentioned in the history of that disease; (11.) the scales remained a long time after the eruptions vanished, and left more unseemly scars behind them. It is well worth noting, that throughout the whole course of years which this constitution lasted, wherein the dysentery raged so epidemically, the small pox, when exasperated by an immoderate hot regimen, sometimes terminated in a dysentery; as I more than once observed. Chap. 6.

8. But it is proper to observe, that this small pox was not attended with such fatal symptoms during the whole time of its continuance, for, after having prevailed two years, it began to grow milder in the third year, namely, in 1672, and the eruptions having lost their blackness, grew by degrees yellow, like a honey comb, which is peculiar to the regular small pox, during the suppuration of the pustules, so that in the last year of this constitution it proved very mild and gentle, considering its kind. Nevertheless it is manifestly to be referred to a quite different kind, on account (1.) of the remarkable smallness of the pustules, (2.) the tendency to a salivation, and (3.) other concomitant symptoms. The small pox became more gentle in the third year.

9. Though our ignorance of the causes of every specific difference be such, as makes it impossible for us to comprehend wherein this small pox differs from those produced by the other constitution; yet to me it plainly appears, from the several concomitants, that this sort was attended with greater inflammation than the other, and therefore that the whole of the cure consists in giving a greater check to the violent ebullition of the blood. And this is chiefly The method of cure.

Sect. 4.

chiefly effected by a temperate regimen, after exhibiting opiates as above directed; *e. gr.* allowing the free use of some liquor that is not heating; but will rather immediately abate the violent heat, which fatigues and parches the patient more in this than in any other disease, especially during the suppuration of the pustules. The *white decoction*, made of *bread and a little burnt hartshorn*, boiled in a large proportion of water, and sweetened with sugar, is beneficial here; but *milk boiled with thrice its quantity of water* is generally a more grateful liquor, and better answers the end of cooling; drinking plentifully is not only proper to diminish the extreme heat, which chiefly prevails during the *secondary fever*, but also promotes the salivation, and keeps it up longer than it could be continued, if the patient were over heated. And, farther, I have often observed that cooling liquors, drank plentifully, have succeeded so well, that by means thereof the small pox, which appeared at the beginning with the worst signs of the confluent kind, hath in the course of the disease been rendered distinct; and the eruptions, which, as they ripened, would otherwise have first discharged a red, and soon after a black matter, have looked very yellow, and, instead of being inflamed and very small, proved of a mild and good kind.

Advantages
of drinking
cooling li-
quors plen-
tifully.

10. Nor does the menstrual discharge, which frequently happens to women in this disease, at all forbid, but rather encourage the free use of these liquors, especially if it comes at an unusual time. For all the danger here is left the blood, being too much attenuated by the excessive heat of the disease, should break through
the

the vessels wherever it can find a passage, especially when unskilful nurses add oil to the flame, by using a hot regimen, and a decoction of *hartshorn*, with *flowers of marigold*, &c. Now whatever greatly dilutes and cools the blood, inasmuch as it checks this flux, does necessarily, though not immediately, tend to preserve the eruptions, and the swelling of the face and hands in their due state; whereas contrariwise, heating remedies, notwithstanding they may seem better suited to this purpose, yet as they promote this discharge, they fall short of answering the end. And I doubt not but abundance of women have perished by the mistake of such as had the care of them, who apprehending the sinking of the eruptions from this discharge, have endeavoured to prevent it by a hot regimen and cardiacs, by which means the patient hath been certainly destroyed; though at the same time they solicitously endeavoured to stop the hæmorrhage, and keep the eruptions and swelling at the proper height, by mixing different astringents with the cardiacs.

Chap. 6.

11. I lately attended a lady, who had this dangerous black small pox, and though I forbid every thing at the beginning that might agitate the blood, yet as she was of a very sanguine complexion, in the flower of her age, and of a lively disposition, and the weather at the same time very warm, she was suddenly seized, on the third day after the eruption, with so copious a menstrual discharge, at an unusual time, that the women about her suspected she had miscarried. Though this symptom was very urgent for several days, yet I did not therefore judge that the use of the milk and water

Exemplified
in a case
where the
menstrual
discharge
happened
during the
small pox.

Sect. 4. water was to be discontinued, but rather esteem-
 ed it more necessary, and to be drank plentifully
 now, and likewise through the whole course of
 the disease, particularly upon the coming on of
 the *suppuratory fever*. At this time Dr. *Millington*,
 formerly my fellow collegiate, and now my
 intimate friend, was joined with me, who ob-
 serving that every thing went on very well, ac-
 cording to the nature of the disease, readily
 consented that our patient should persist in drink-
 ing freely of the liquor above mentioned, which
 she often declared was particularly grateful to
 her, promoting the spitting, and both cooled
 and refreshed her. But when the face began to
 harden, and to be crufted over, we apprehended
 our patient would be injured by the putrid va-
 pours proceeding from the purulent matter of
 the eruptions, which had a very fetid smell in
 this worst kind of small pox, and therefore di-
 rected a few spoonfuls of *mulled sack* to be taken
 once a day, or as often as she perceived any
 sickness at her stomach. And by the use of
 these few things, along with a *quieting draught*
 every night, she recovered, without having been
 seized with a *delirium*, or any other very dan-
 gerous symptom, except the hæmorrhage above
 mentioned. The face and hands swelled suffi-
 ciently, the eruptions were as large as this sort
 of small pox would permit, and the salivation
 was easy and copious to the end; and, lastly,
 though the eruptions in the face seemed blackish,
 whilst they ripened, yet they were yellow in
 most other parts.

Where un-
 necessary.

12. But how much soever the kind of small
 pox, peculiar to this constitution, exceeded those
 of other constitutions in point of heat and in-
 flammation,

flammation, yet when the eruptions were distinct, or few, experience shewed it to be needless to drink so copiously of the above-mentioned liquors. But it sufficed if the patient drank small beer enough to quench his thirst, and supped water gruel and panada, and sometimes eat a roast apple, and (if he exceeded *fourteen*) took a dose of *syrup of white poppies*, when sick, or delirious for want of rest; and I did nothing more when the pustules were few, except keeping the patient in bed. By this method alone my son *William* was, by the blessing of God, recovered in this distinct sort of small pox, in *December 1670*.

13. I shall add nothing more relating to the small pox of this constitution, as having treated of the other kind at large, from which the present only differs by being of a hotter and more inflammatory nature; whence it follows that more care was required in order to diminish the considerable heat, which was so natural to it, and so certainly threatened the destruction to the patient.

C H A P. VII.

Of the bilious Colic of the Years 1670, 1671, and 1672.

1. DURING all the years of this constitution, the blood was considerably disposed to deposite hot and choleric humours in the intestines, whence the *bilious colic* prevailed more than ordinary; which disease, though it should be reckoned amongst those of the chronic kind, and of course foreign to my purpose, yet as it

The bilious colic, why treated of here.

Sect. 4. depended on the same indisposition of the blood at that time, from which most of the then prevailing epidemics arose, it should for this reason be treated of here; but especially because I perceived that the same febrile symptoms preceded it, which usually preceded the reigning *dysentery* of those times. And sometimes also this distemper, as above remarked, succeeded the dysentery, when it had continued a long time, and seemed to be going off. But when it did not succeed an inveterate dysentery, it generally arose from a fever, which afflicted the patient only for a few hours, and ordinarily terminated in this disease.

Its symptoms.

2. It chiefly attacked young persons of a warm and bilious constitution, especially in the summer season. (1.) A violent and intolerable pain of the bowels attends it, which sometimes seem to be tied together, and at others closely purged up, and bored through, as it were, with a sharp-pointed instrument: the pain abates between whiles, but immediately returns again. (2.) In the beginning the pain is not so certainly fixt in one place, as in the progress of the disorder; (3.) the vomiting is less frequent, and the belly more easily moved by purgatives; (4.) but as the pain increases, it becomes more obstinately fixt in one place; (5.) frequent vomitings succeed, and the belly is more costive, till at length (6.) the excessive violence of the symptoms occasions a total inversion of the peristaltic motion of the guts (unless the patient be relieved sooner) and consequently an *iliac passion*, in which distemper all cathartics immediately become emetic, and glysters likewise, together with the *fæces*, are forced up the intestinal

testinal tube, and ejected by vomit. If the matter thus thrown up be quite pure, it is sometimes green, sometimes yellow, and sometimes of an uncommon colour. Chap. 7.

3. *As all the signs of this disease clearly* * shew The indications of cure;
it to arise from some sharp humour, or vapour, thrown

* *As all the signs of this disease, &c.* Of this affection the proximate cause is similar to that of the iliac passion, and indeed they may be considered as one and the same disease, only in different degrees. See our note, pag. 67.— Dr. Cullen defines the colic,

A pain of the abdomen, particularly in the umbilical region, running round the navel, attended with vomiting, and costiveness; of which there are seven species considered as idiopathic:

The first called *colica spasmodica*, attended with a retraction of the umbilicus, and spasms of the abdominal muscles; and varies according to particular symptoms, either when a vomiting of feculent materials, or of those things thrown into the rectum through the anus, is a concomitant, or when an inflammation comes on. Instances of the first we have in the *ileus spasmodicus*, or *volvulus*; of the last in the *ileus inflammatorius*, or *colica phlogistica*.

The second, *colica pictonum*; in which a sense of weight, or an uneasy sensation in the abdomen, particularly about the umbilicus, precedes; then comes on a colicky pain, slight at first, not continual, and increasing particularly after eating; at length it becomes more violent, and almost constant, with a pain of the arms and back, terminating at last in a paralysis; and has its varieties from the remote cause, as arising either from metallic poison, from acids internally, cold, or a contusion of the back.

The third, *colica stercoria*; occurring in men of costive habits, after long costiveness.

The fourth, *colica accidentalis*; from acrimonious matter internally.

The fifth, *colica meconialis*; from a retention of meconium in new-born infants.

The sixth, *colica callosa*; this is attended with a sense of constriction in some part of the intestines, often having flatulencies collected before it, and some degree of pain, which flatulence passing gradually through the stricture, vanishes;

Sect. 4. thrown off from the blood into the intestines; I
 judge the primary indications of cure,* (1.) to consist

a costive state of bowels, and at length voiding only liquid fæces in small quantity.

The seventh, *colica calculosa*: when there is a hardness fixed in a certain part of the intestines; calculi having formerly been ejected through the anus.

To which are added a number of symptomatic colics.— See *Synopsis Nosologiae Methodicæ*, vol. ii. pag. 235, &c.

But it is to the bilious colic we are here to confine ourselves, which we think more fully, and more accurately described by SAUVAGES; who says, this disease attacks lively young men of hot constitutions; those who are irascible, and make free use of spirituous liquors; also men of bilious temperaments, overheating themselves in a hot summer, attended sometimes with feverish affections, sometimes not. The symptoms are a hoarse voice, cardialgia, loathing of food, bilious, porraceous vomiting, hiccough, heat, thirst, a bitter taste in the mouth, the urine small in quantity and deep coloured, with a costive state of bowels in general, though not in all, for sometimes there are frequent and bilious stools; but the pain oftener affects the small bowels, as the duodenum; the abdomen is neither tense nor hot, as in the inflammation of the bowels; urine flows freely; the head is affected with vertigo; the pulse neither hard, nor tense, though frequent, and is often succeeded by the jaundice.—*Nosologia Methodica*, vol. ii. pag. 102.

Dr. Swan says, “he knew a person in years, otherwise subject to this disorder, who, every time he put himself in a violent passion, as certainly had a fit of it soon after; in one of which he at length died in a few hours.” When the bilious colic attacks with a shivering, and the pain is exceedingly violent, great danger attends it; an inflammation being denoted thereby, which, if not remedied, terminates in a mortification. *W.*

* *I judge the primary indications of cure, &c.* The indications here, and mode of cure in general, are similar to what we delivered when treating of the iliac passion, pag. 67—69. hence unnecessary to be repeated; we shall therefore only add, that in this species of colic, the drinking of cold water is highly beneficial, and often curative; and should be used freely where there is no suspicion of an attendant inflammation, and then its use must be prohibited; tepid liquids

first in evacuating both the *antecedent* humour in Chap. 7. the veins, and that contained in the intestines; and the next, (2.) in checking the great tendency of the humours to the parts affected, and easing the intolerable pain, by exhibiting opiates.

4. In order hereto I bleed freely in the arm, if no blood has been taken away before, and in three or four hours after administer an opiate. The method of answering them. The next day I direct some lenient purgative, and order it to be repeated a second time, at a day's interval, and sometimes a third time, according as the remains of the humour seem to be more or less in quantity. But it must be observed, that if this disease proceeds, either from a surfeit of fruit, or any other kind of aliment of difficult digestion, whence depraved and corrupt juices are first received into the blood, and thence separated into the intestines; in these cases the stomach must first be well cleaned by drinking posset drink plentifully, and vomiting it up again, which being over, an opiate must be given, and a vein opened the next day, and, in other particulars, the process above delivered is to be followed. How to be cured if it proceeds from a surfeit.

5. But when the violence of the pain, and the vomiting, whence the intestines are in a manner inverted, do not yield to purgatives, they must be made stronger; for it avails not to exhibit a gentle cathartic, unless perhaps the patient be easy to work upon, which should be carefully inquired into, because such a medicine, being too weak to make its way through the in- The purgatives when to be made stronger.

liquids are preferable to those which are hot; which also may be said of bathing: acidulated drinks may be freely used, particularly if the bile seems to partake of great degrees of acrimony. W.

Sect. 4. testinal tube, does more mischief, the vomiting and pain being increased by its languid and ineffectual motion. A lenitive purging potion, made of an infusion of *tamarinds*, *sena*, and *rhubarb*, in which *manna*, and *syrup of roses* may be dissolved, is to be preferred to other purges, because it disturbs and agitates the juices less. But if this cannot be retained in the stomach, either (1.) because the patient has an aversion to a liquid medicine, or (2.) by reason of the vomiting, recourse must necessarily be had to pills, amongst which I esteem *pil. cockiæ* most, because it operates best in this and most other cases. But where either (1.) through the weakness of the stomach, or (2.) the vomiting, pills cannot be retained, I first prescribe an opiate, and in a few hours after a purgative, at such a proper interval, for instance, that the latter may not be overcome, and rendered ineffectual, but continue long enough in the stomach to communicate its purging quality thereto, so that it may at length operate immediately after the virtue of the opiate is gone off. However, if the case will admit, it is best to give the purge a considerable time after the opiate, because it operates with difficulty, even twelve hours after the exhibition of the opiate.

An opiate,
when to be
given before
a purgative.

One to be
exhibited.

6. But because a purge always increases the pain in this and most other diseases where opiates are indicated, at least when the operation is over, the patient sometimes finding relief whilst it works, I generally give an opiate immediately after it has done operating, and order it to be repeated daily morning and evening, on the intermediate days, that I may more certainly ease

ease the pain, till purging has been sufficiently performed. Chap. 7.

7. When the affair of purging is over, I endeavour to check the violent motion of the humours, which is all that now remains to be done, by exhibiting an opiate every morning and evening, which must sometimes be repeated oftener: nor have I ever been able to ease very violent pains, without administering a larger dose than ordinary, and repeating it. For what might be sufficient to overcome another disease proves ineffectual in this; the violence of the pain destroying the force of the medicine. Opiates may be safely repeated whilst this kind of pain continues violent, but not after it ceases; for which reason I repeat the opiate in proportion to the violence of the pain, till it either goes quite off, or abates considerably; observing, however, to administer it at such convenient intervals, that I may know what effect is to be hoped for from the former dose, before I proceed to give another. But, in general, unless the pain be very severe, it will suffice to exhibit an opiate morning and night. My usual opiate then is *laudanum* above described; of which I give sixteen drops at a time, in some distilled cordial water; or the dose may be augmented occasionally, according to the violence of the pain.

To be given morning and night after the affair of purging is over.

8. This plain method, whereby (1.) the peccant humour is discharged by bleeding and purging, and then (2.) ease procured by means of opiates, has always succeeded better with me than any other I ever knew; whereas carminative glysters, injected in order to expel the sharp humours, prolong the disease by raising

Carminative glysters, bad.

Sect. 4. a disturbance in the juices. But I would have it particularly remarked here, that though I have affirmed that bleeding and purging must necessarily precede the quieting method, yet sometimes, when the case demands it, omitting both, the cure is to be begun with opiates. For instance; when by reason of some preceding illness, large evacuations have been used not long before the colic began; for frequently such as have recovered lately from some other disease, *are suddenly attacked with this, from a weakness of the bowels,** especially if a greater degree of heat be occasioned by too free an use of wine, or any spirituous liquor: now in this case I esteem it not only unnecessary but detrimental to raise fresh commotions, by giving more purges. Not to mention that the patient, in

When the cure is to be begun with opiates.

* *Are suddenly attacked from weakness of the bowels, &c.* From hence the bowels become very irritable, and thrown into spasmodic constrictions from any slight cause; bleeding and purging in these cases are very detrimental, as increasing the debility of the intestines; opiates are the most certain and safe remedy for relieving the uneasy sensations immediately, and occasionally, which ought to be succeeded by nervines and tonics, to give proper power to the intestinal canal; and riding on horseback will greatly conduce to the preventing a relapse: for nothing strengthens the viscera and intestines more than this species of exercise, which should be taken when the bowels are in their most empty state, or when the business of digestion is somewhat advanced. Its use arises from the repeated gentle agitation given to these parts, which are calculated to remove visceral obstructions, promote the circulation of the blood, clear away viscidities from the bowels, determine the fluids to the surface of the body, and increase perspiration. Dr. Huxham had an high opinion of this remedy, and says, where tedious courses of medicines have failed, in some chronic diseases, riding only has performed a cure; hence advises, when a patient can sit on horseback, that he should have daily recourse to this exercise. W.

this

this disease, has generally cleansed his bowels Chap. 7.
 sufficiently, by the frequent use of glysters, be-
 fore applying to a physician; so that partly upon
 this account, and partly by reason of the long
 continuance of the disease, it should seem that
 only opiates ought to be exhibited.

9. In *August*, 1671, I was sent for to *Belvoir* Exemplified
in a case.
 castle by Lord *Annesley*, who had been afflicted
 for some days with a bilious colic, attended with
 exquisite pain, and frequent vomiting. He had
 tried all kinds of glysters, and other remedies
 directed by the neighbouring physicians: I im-
 mediately advised the repeated use of opiates in
 the manner above delivered, and by this means
 he recovered in a few days, and returned to town
 with me in good health.

10. As this pain of its own nature is more apt
 to return than any other, all occasion of relapse
 is to be prevented by exhibiting an opiate twice
 a day for some time. But if it should return
 upon omitting the opiate, as it sometimes hap-
 pens, I have hitherto discovered nothing that will
 so certainly promote the cure, as taking long Riding on
horseback
excellent to
promote the
cure.
 journeys on horseback, or in a coach, observing
 in the mean while to give an opiate every mor-
 ning and evening. For by this kind of exercise
 the morbid matter is brought to the habit of the
 body, and the blood, broken and divided by the
 continual motion, does, as it were, undergo a
 new depuration, and at length the bowels are
 greatly strengthened and refreshed by this way
 of rousing the natural heat. Nor do I think it
 beneath me to own that I have frequently cured
 this disease by this exercise, when all other
 means had failed me. But this must not be at-
 tempted, unless sufficient evacuations have been
 previ-

Sect. 4. previously made, and is to be persisted in several days afterwards.

Instanced in
a case.

11. During these years one of my poor neighbours, yet living, was seized with a most violent bilious colic, which he had long endeavoured ineffectually to relieve by cathartics, glysters, and swallowing leaden bullets, I had recourse here to the frequent use of opiates, nor did they prove unsuccessful, for he remained tolerably easy whilst he was taking them. But perceiving they only palliated, and did not eradicate the disorder, for it returned immediately after the effect of the opiate was gone off, I had compassion on the man, labouring under low circumstances, and a violent disease, and lent him a horse to ride a long journey, as above directed; and after riding a few days, his bowels became so strong as to be able to expel the remains of the disease, and he recovered perfectly by this means without the assistance of opiates.

12. And, to speak the truth upon this occasion, I have always known this kind of exercise used with great success, not only in this case, but in most other chronic diseases, provided it were resolutely persisted in. For if we consider that the lower belly, wherein all the secretory organs are seated, is greatly shook by this exercise, perhaps some thousand times a day, we shall readily believe that they are hereby enabled to shake off any gross fizy humours fixed there; and (which is still more material) so strengthened by this powerful rousing of the natural heat, as to be able to perform the function of purifying the blood, assigned them by nature, in a proper manner.

13. For

13. For young persons of a hot constitution, Chap. 7. I direct a cooling inraffating diet ; for instance, ^{The regimen in this dis-} barley, cream, panada, &c. and a small chicken, ^{case.} or a boiled whiting, every third day, if the appetite continues craving, and I allow no other liquor than small beer, or milk boiled with thrice the quantity of water for drink ; unless riding, which is necessary to complete the cure, requires a more nourishing diet and the use of some more generous liquors, to recruit the loss of spirits occasioned by exercise.

14. Moreover it is manifest from observation, ^{Cordials to be given, when it proves inveterate.} that when this disease through wrong management proves of long standing, so that the bowels become weak, and the patient is extremely emaciated and debilitated, the free use of *plague water*, *AQUA MIRABILIS*, or any other cordial that was most grateful to him when in health, relieves at this time beyond expectation. For by this means the small remains of the natural heat and spirits are roused, and the preternatural ferment lodged in the bowels, which occasions fresh fits between whites, will be stopt.

15. *The slender diet abovementioned* * must be ^{A slender diet to be continued for some time after the cure.} conti-

* *Slender diet must be continued, &c.* This should be observed after all diseases, where the constitution has been debilitated, and the digestive powers rendered extremely weak ; but perhaps in this case its observance is more essentially necessary, as the organs of the first digestion have suffered so materially, and an error in diet so likely to occasion a return of the disease.

Spirit of nitrous æther has been held by some authors extremely serviceable through the whole course of this disease, as it quenches thirst, promotes the natural secretions, expels flatulencies, moderately strengthens the stomach, is antiseptic, promotes urine, loosens the belly in hot dispositions, and checks diarrhœas from the acrimony of

Sect. 4. continued, not only through the course of the cure, but for some time after the disease is gone off; for it is more apt to return than any other, and besides is seated in the principal instruments of concoction, which are the bowels, already weakened thereby, the least error of this kind will immediately occasion a relapse. And therefore all aliment of difficult digestion must be carefully avoided, both in this and all other disorders of the bowels, and food of easy digestion used very sparingly.

The hysteric colic described.

16. Some women are afflicted with an hysteric disorder, so nearly resembling the bilious colic* in (I.) the

of the bile; and allays vomiting sometimes, where the saline mixture fails. HOFFMAN considers nitre, either given alone, or joined with carminatives, an excellent remedy, especially in the bilious colic; for if the bile is vitiated by a congestion of acrid fordes retained in the humours, it acts like poison by irritating the nervous system, and producing præternatural heat, anxiety, inquietude, enormous evacuations, and intense pains: in order, therefore, to correct its peccant state, nitre is esteemed one of the most efficacious remedies.

If, however, when the disease is conquered, should the stomach and bowels be left in a weak and relaxed state, nothing can contribute so speedily and effectually to invigorate those parts, and restore them to an healthful tone, as the waters of Bath. *W.*

* An hysteric disorder, so nearly resembling the bilious colic, &c. The modes of cure being so very different in these diseases, an exact discrimination becomes particularly necessary. The *colica hysteric* of SAUVAGES nearly agrees with this, and seems only to differ with respect to the seat of the affection; that of SYDENHAM being in the stomach; that of SAUVAGES in the intestines, which he thus describes:

The hysteric colic is a violent pain in the intestines, receding even on the slightest stroke, returning at intervals, and suddenly, without any evident cause; which leaves, after the abatement of the pain, an extreme tenderness of the parts, and soreness on touching, and which alternates with

the sharpness of the pain, (2.) its seat, and (3.) Chap. 7.
 the yellow and green colour of the matter discharged by vomit, that I will treat of it by the way, for fear it should be taken for the disease just mentioned.

17. Females, (1.) of a lax and gross habit of body are chiefly subject to it, as are (2.) likewise such as have formerly had some hysteric indispositions, or (which frequently happens) those who have just recovered of a difficult labour, occasioned by the largeness of the infant, whereby the mother's strength and spirits were nearly exhausted. (1.) It attacks the region of the stomach, and sometimes the parts just below it, with as violent a pain as accompanies the colic, or iliac passion; which (2.) is succeeded by exorbitant vomitings, sometimes of green, and sometimes of yellow matter; (3.) and to these symptoms, as I have frequently observed, succeed a greater lowness of spirits and despondency than occur in any other disease. The pain goes off in a day or two, but returns again in a few weeks after, and rages with as much violence as ever, before the fit terminates. It is sometimes attended with a remarkable *jaundice*, which vanishes spontaneously in a few days. When the symptoms are all gone off, and the patient seems pretty well recovered, the least disturbance

with dimness of sight, syncope, and dejection of mind; in this disease, as in the hysteric gastrodynia, greenish materials are not ejected upwards, but by stool; but this is a sign of a particular species, because the extreme pains of the abdomen may not in the least tend to promote these evacuations, and may invade sometimes suddenly one, sometimes another part of the abdomen.—*Nesologia Methodica*, vol. ii. pag. 105.—Dr. Cullen considers it only as a symptomatic colic.—*W.*

of

Sect. 4. of mind, whether proceeding from anger or grief, to both which women are extremely subject in this case, is apt to occasion a relapse. Walking also, or any other exercise used too soon, will do the same; such causes being productive of vapours in lax and weak constitutions. I use the term *vapours* with the vulgar, but whether they be vapours, or convulsions of particular parts, the appearances may be equally accounted for.

A relapse,
how occasioned.

Vapours artfully resemble most diseases.

18. When these *vapours* or convulsions attack any particular part of the body, they produce such symptoms as are natural to the part affected; whence, though they every where constitute the same individual distemper, yet they artfully resemble most diseases incident to mankind; as plainly appears from the disease under consideration, which exactly counterfeits the bilious colic, when it attacks the parts adjacent to the *colon*. And this is equally manifest also in many other parts of the body affected with this disease. For instance, *it sometimes attacks one of the kidneys with a violent pain,** occasioning excessive vomiting;

* *It sometimes attacks one of the kidneys, &c.* A case of this sort I was called to in a young gentleman at Bromley in Kent, who had been affected with violent pains in the kidney for some weeks; and which were concluded by his attendants to arise from a stone fixed there. He was repeatedly bled, purgative and oleaginous medicines had been given him, but without any relief; indeed he was reduced so extremely low, that his life was by his friends despaired of. When I saw him, I found him much enervated, his complexion very pale, his water limpid; he was oppressed with a thousand fears, and so irritable, that on the slightest occasions his pulse perceptibly altered. His removal to town was immediately necessary, which appeared to himself and attendants impossible; however, on giving him twenty drops of liquid laudanum, which was once repeated in three hours,

ing; and being frequently conveyed through Chap. 7.
 the ureters, it counterfeits the stone, in which
 case, the pain being increased by glysters, and
 other *lithontriptic* medicines used to bring away
 the stone, it continues with the same violence for
 a long time, and sometimes destroys the patient
 contrary to its nature, as being of itself not dan-
 gerous. I have also known it occasion a train
 of symptoms exactly like those of the stone in
 the bladder. I was called up lately in the night
 to a Countess in the neighbourhood, who was
 seized, on a sudden, with a very severe pain in
 the region of the bladder, along with a stoppage
 of urine; and having learnt that she was subject
 to various hysteric complaints, I conjectured that
 the disorder was mistaken; and therefore forbid
 the injecting a glyster, which her woman had
 got ready, as apprehending it might be augment-
 ed thereby; and instead of this and the emol-
 lients brought by the apothecary, such as the
syrup of marsh mallows, &c. I administered an
 opiate, which soon removed the complaint. In
 reality, no part of the body, either external or
 internal, is quite free from the attacks of this
 distemper, as the jaws, hips, and legs, in all
 which it causes intolerable pain, and when it goes
 off, leaves such a tenderness of the part behind
 that it cannot bear the touch, as if the flesh had
 been bruised with abundance of stripes.

A case
 wherein
 they coun-
 terfeited the
 stone.

hours, he felt himself totally freed from pain, and so reco-
 vered in general with respect to his spirits, that he under-
 took and performed his journey with infinite ease, and was
 in a little time perfectly cured of that complaint by bark
 joined with other nervous medicines; opiates and aperients
 being given occasionally, for his habit was naturally cos-
 tive. *W.*

Sect. 4. 19. Having now, by way of digression, communicated some remarks belonging to the history of the *hysteric colic*, to prevent its being taken for the *bilious colic*, I will briefly treat of some other particulars relating to the cure of the symptom of pain attending it: for the *radical* cure of the disease itself, which is affected by removing the cause, is a quite different subject, and to be considered in another place.

The pain in the *hysteric colic* generally increased by bleeding and purging.

20. Bleeding and repeated purging, which are so manifestly indicated in the bilious colic, at the beginning, should be omitted here, except in the case hereafter to be mentioned. For experience shews, that the pain and other symptoms are increased by the disturbance caused by these evacuations, and I have often observed, that the repetition of the gentlest glysters hath occasioned a continued train of symptoms. For if we take a view of the causes whence this disease generally proceeds, both reason and experience teach that it is rather owing to irregular motion of the spirits, than to any depravity of the juices. Now these causes are either (1.) copious and preternatural hæmorrhages, (2.) inordinate passions of the mind, (3.) violent exercise of the body, and the like; in all which, such medicines as increase the hurry of spirits are improper, and opiates are to be exhibited in their stead, though the green and ill colour of the matter ejected by vomit should seem to indicate the contrary. For the consideration of colour is of too subtle and refined a nature to authorize such evacuation as experience proves to be detrimental. And I doubt not but this disease, which, though it be very painful, does no way endanger life, hath proved fatal to abundance of persons, through mistakes of this kind.

To

To this may be added, that though the strongest emetic be given to day, in order to expel the supposed cause of the disease, yet the patient will next day vomit a matter, full as green or of some other bad colour, like the former. Chap. 6.

21. But it must be observed, that sometimes there is such a foulness of blood and juices, as resists the operation of an opiate so powerfully, that, notwithstanding it be very frequently repeated, it avails not to quiet the disturbance, unless bleeding or purging precede; as I have remarked in women of a very sanguine constitution and robust make. This being the case, one or other of these remedies, and perhaps both, must be previously used, in order to make way for the opiate, a moderate dose whereof will then produce the intended effect; though before bleeding or purging, the largest dose availed not. But this is a case that seldom happens, and these remedies are not then to be repeated. These particulars being premised, where there is a demand for opiates, we are to proceed in administering them according to the method specified in treating of the *bilious colic*: and they are to be repeated, in point of frequency, in proportion to the abatement of the pain. This method indeed is only adapted to relieve the present symptom of violent pain; for I have not undertaken to treat of that, in this place, which removes the cause of the disease.

22. But as this distemper, both in hypochondriac and hysteric subjects, (for the reason is the same in both, as we shall shew in another place) often terminates in a jaundice,* which increases propor-

* Often terminates in a jaundice, &c. This is the *aurigo hysterica* of SAUVAGES, and the *icterus spasmodicus* of Dr. CULLEN,

Yet sometimes they are necessary, and where.

It often ends in a jaundice.

Señ. 4. proportionally as the original disorder goes off, it must be remarked, that in curing this kind of jaundice, all purgatives are either wholly to be refrained, or none exhibited, except *rhubarb*, or some other gentle lenitive; for it is to be apprehended that a new commotion may be occasioned by purging, and consequently a return of the symptoms. In this case therefore it is more expedient to give no medicines at all, as the jaundice arising from this cause abates by degrees spontaneously, and totally vanishes in a short time. But if it continues long, and seems to go off slowly, we must have recourse to medicines. I commonly use the following:

The cure of it.

An aperient apozem.

Take of the roots of madder and turmeric, each an ounce; the roots, together with the leaves of the greater celandine, and the tops of the lesser centaury, each an handful; boil them in equal quantities of Rhenish wine, and spring water, to a quart; to which, when strained off, add two ounces of the syrup of the five opening roots: mix them together for an apozem, of which let the patient take half a pint warm, every morning and night, till the cure be completed.

The cure of an original jaundice.

23. *But where the jaundice comes of itself,* without being preceded by the colic, besides the alteration*

CULLEN, distinguished by its coming on after spasmodic diseases, and mental affections. This generally goes off spontaneously in a few days, and seldom requires the application of any remedies; but should it continue, the large dose of such a nauseating composition prescribed by our author, or that supplied by Dr. Swan, is extremely unpleasant. Soap and rhubarb, joined with some of the stimulating antispasmodic gums, given in the form of pills, will generally answer every purpose. *W.*

* *But where the jaundice comes of itself, &c.* Our author here has given no account of the jaundice, and has treated

alteratives just set down, such medicines must be given once or twice, as evacuate the bile by stool, before

Chap. 6.

treated the cure in a very superficial manner ; for the disease itself will neither be known, nor always cured in those cases which are within the reach of art, by what is here recited. The attempt to supply his defects will therefore be useful. The jaundice then is made manifest by a yellow colour of the skin and eyes, clay-coloured faces, deep red-coloured urine, which will tinge a white linen cloth immersed therein of a yellow colour. Its proximate cause is obstruction of the ductus communis choledochus, occasioned generally by viscid or concremented bile ; or from spasm affecting the duct, or duodenum ; or from some contiguous tumour : by which means the secreted bile is re-absorbed and diffused over the whole of the system, or it may regurgitate in the ducts themselves, and pass immediately into the vena cava. To the symptoms above recited, we may add, that there is sometimes a pain felt in the epigastric region, often attended with vomiting. Sometimes also there are febrile affections, accompanied with a full, hard, and frequent pulse.

The most common cause of this disease is most generally concluded to be biliary concretions formed in the gall bladder, passing into the ductus communis, and there remaining unable to force their way into the duodenum ; and there can be little doubt but thick viscid bile, causing similar obstruction, produces the same effect. In either of these cases, if there is the appearance of plethora in the habit, bleeding is necessary, and such remedies as will open the obstruction ; for which purpose, after purging once or twice, vomiting is useful, and that may be repeated, administering intermediately saponaceous, aperient medicines, such as soap, rhubarb, aloetics, calomel, taraxicum, and sal diureticus ; in cases of viscid bile these will almost always be sufficient : but where bilious concretions are to pass, opiates may be administered also, in order to assist in relaxing the duct, and promoting their exit. Though vomiting in this species may be useful, it must be cautiously produced, for if it procures not the passage of the concretion, it may be disserviceable, should it be violent ; the gentler emetics should therefore only be administered. And in this respect Dr. Cullen prudently advises, that when, from the long continuance of the disease, we shall have reason to suspect the calculus is large, or more especially when the pain attending

Sect. 4. before the patient begins with the apozem above prescribed, and once a week afterwards, whilst it is continued,

A purging
bolus.

Take of the electuary of the juice of roses, two drams; rhubarb finely pulverized, half a dram; cream of tartar, a scruple; syrup of succory, with rhubarb enough to make them into a bolus, to be taken betimes in the morning, drinking after it a glass of Rhenish wine.

tending the disease creates an apprehension of inflammation, vomiting should be altogether prohibited. Strong purgatives here can seldom be proper, nor, indeed, those of the milder class, only to prevent the body from being costive. When pain is an attendant circumstance, fomentations of the epigastric region are singularly serviceable, as the relaxation of the skin contributes to relax the whole system, and particularly to relieve the constriction of the subjacent parts.—*Practice of Physic*, vol. iv. pag. 446.

Ætherial oil of turpentine has been considered by some as a solvent of these concretions, whilst in the machine. One case which I saw seemed to favour this opinion—Mr. Robinson, a butcher, of York, whom I attended with Dr. Hunter, a principal physician of the same place, was afflicted with the jaundice, which yielded not to the common remedies; he took then the ætherial oil, suspended with the yolk of an egg, in a mixture, and after three or four days continuance, there was the appearance of bile dissolved, as if in an oily menstruum, floating upon the surface of one of his alvine evacuations; after which he recovered daily.

If an hæmorrhage attends, the case is always replete with great danger, for it is an indication of the blood's being in an acrimonious state, and its texture broken. Aloetics and attenuants must give place here to acids and demulcents; amongst which, the oleum Ricini formed into an emulsion, and decoctions of hempseed, are recommended.

If it arises from tumours of the neighbouring parts, or schirrosity of the liver, it is rarely cured: however, such things ought to be tried, as seem calculated to remove or palliate them; amongst which, perhaps, cicuta is the most eligible. *W.*

But if, notwithstanding the long * continuance of these medicines, the disease still remains obstinate, the patient should go to some place where there is a chalybeate mineral spring, for instance, Tunbridge, and drink the water every morning at the well-head till he recovers.—And let this suffice for the diseases of this constitution.

Chap. 1.
If it proves obstinate, a course of mineral waters must be used.

SECTION V. CHAP. I.

Of the epidemic Constitution of part of the Years 1673, and of the Years 1674, 1675.

1. ABOUT the beginning of July, 1673, there arose another kind of fever, which did not prove very epidemic; because the constitution was not yet so entirely disposed to favour it, as wholly to exclude the diseases of the preceding constitution. For that kind of small pox which began in 1670 was not yet extinct, though it appeared less frequently, and the symptoms were milder; so that these two diseases prevailed almost equally, but neither very severely, the former constitution being not so totally gone off, as to leave none of the diseases belonging thereto, (for the dysentery continued to attack a few) and the then reigning constitution not being so

The rise of a new kind of fever.

* But if, notwithstanding the long continuance, &c. Harrowgate and Bath waters are esteemed by some almost specific in these cases. These should be drunk in the beginning of summer, and in dry seasons, and the particular circumstances of the constitution considered, modes of living, &c. so that no general rules can be positively laid down for the patient's observance; only, that taken on the spot, they are much the most efficacious. W.

Señ. 5. perfectly established, as to produce such as might exterminate all other distempers.

2. The small pox and this fever continued equally prevalent during this autumn and the following winter, but neither of them raged with great violence; and the dysentery was in a manner extinct. But in *November* following, a sharp frost of some days being unexpectedly succeeded by warmer weather than I ever remember to have observed at this season, some few persons were seized with the dysentery a little before and about *Christmas*; but it seemed then to be going off, and in a short time afterwards this kind of it at least quite vanished.

When the measles began in this constitution.

3. The next year the measles appeared very early, namely, in *January*, and proved as epidemic as that kind which began about the same time in 1670; for few families escaped it, and it attacked children especially: but it was not so regular in its stages, as that which prevailed in the above-mentioned year. But I shall say more of the difference between them, when I come to treat of this kind more particularly. It increased every day more and more, till the *vernal* equinox, after which it abated as gradually, and at length went off soon after the *summer* solstice.

4. As the epidemic measles of 1670 introduced the *black small pox* above described, so the present kind, which appeared in the beginning of the current year 1673, being equally epidemic, was accompanied with a similar kind of small pox. For whereas the small pox of the preceding constitution, as hath been already observed, after the first two years gradually abated of their blackness, and also increased proportionally in size, till towards the end of the year

1673,

1673, when, considering the kind, it was mild and favourable, it now returned with its former violence, and attended with very dangerous symptoms. This kind of small pox prevailed during the following autumn, and continued longer than usual in winter, which, on account of its uncommon warmth, favoured this disease; but when colder weather came in, it abated, and soon gave place to the present epidemic fever.

5. This fever, which had continued the whole year, made great devastation in the beginning of *July*, 1675, but at the approach of *autumn* it began to strike in upon the bowels, appearing sometimes with the symptoms of a dysentery, and at others with those of a diarrhœa; though sometimes it was free from both, and rather seized the head, and caused a kind of *stupor*. In the mean while the small pox, which attacked only a few subjects here and there, disappeared entirely towards the *autumnal* equinox: and now the fever, having overcome the other epidemics, became the capital disease of the year. It must however be observed, that as this fever was much disposed to throw off the morbid matter upon the bowels, which sometimes occasioned a dysentery, but more frequently a diarrhœa; so upon this account the gripes were generally supposed to have destroyed the numbers that died at this time, whereas in reality their death was rather to be ascribed to the fever, for such as attended the sick during this *autumn* knew how much the fever prevailed; so that both the dysentery and the diarrhœa ought rather to be accounted *symptoms*, than *essential* and *original* diseases.

Chap. 1.

The small pox returns.

The fever assumes a different shape.

Sect. 5. 6. This fever proceeded in this manner during the *autumn*, sometimes seizing the head, at others the bowels, every where raging under the appearance of symptoms peculiar to those parts, till the end of *October*; *when the weather, which till now had continued** in a manner as warm as summer, changed suddenly to cold and moist, whence catarrhs and coughs became more frequent than I remember to have known them in any other season. But it is of most moment to observe, that the stationary fever of this constitution usually succeeded these coughs, and hence became more epidemic, and likewise varied some of its symptoms. For whereas some little time before, as above mentioned, it attacked the head and bowels, now it chiefly seized the lungs and *pleura*, whence arose peripneumonic and pleuritic symptoms; though it was still precisely the same fever that began in

Undergoes
another
change.

* *When the weather, which till now had continued, &c.*
The reasoning of Dr. SWAN on this paragraph is by no means conclusive, for though this state of air may contribute to render the fluids acrimonious by obstructing perspiration, he proves not why it should be a means of causing the fauces, throat, and lungs, to become subject to these affections, which produce swellings, coughs, quinries, catarrhal fevers, &c. more than any other of the internal parts of the machine: for, from the sources he specifies, all the internal parts are alike liable to morbid affections. Some reason ought to have been advanced to shew why such a determination of the fluids should be to these parts so peculiarly directed. And here it seems very probable, that it is owing to the moisture drawn in with the air upon the fauces, throat, and lungs, by which they are more immediately weakened and relaxed than the rest: hence, a greater congestion of the humours there, and consequently irritation, from perspiration through the cuticular pores on the surface, being impeded by the attendant cold, producing together strong re-action of the system, and local debility. W.

July

July 1673, and continued without any alteration of its symptoms till the rise of these catarrhs. Chap. 2.

7. These catarrhs and coughs continued to the end of *November*, after which time they suddenly abated. But the fever still remained the same as it was before the catarrhs appeared; though it was neither quite so epidemic, nor accompanied with the same symptoms, both these depending accidentally upon the catarrhs. Moreover upon their going off, a small pox, manifestly of the same kind with that of the preceding year, began to attack a few persons here and there; but as they had now almost completed their second year, the symptoms were not so violent as in the beginning.

Yet still remains essentially the same.

I cannot say how long this constitution will prevail, but this I certainly know, that it has hitherto been very *anomalous* and irregular, as have likewise all the diseases occasioned thereby. I proceed now to treat of the epidemics of this constitution, in the order wherein they succeeded each other,

C H A P. II.

Of the continued Fever of the Years 1673, 1674,
1675.

1. **T**HIS fever, like other epidemics,* was attended with such symptoms soon after its

This fever most inflammatory in the beginning.

* This fever like other epidemics, &c. This fever is considered by Dr. CULLEN as a variety of the *Synocha*, or inflammatory fever; and by SAUVAGES classed with those he terms *synochus*, and called *synochus rheumatizans*. W.

rise,

Sect. 5. rise, as clearly shewed that the inflammation *was then more violent and spirituous, than in its progress.** For the first year of its appearance, and the following spring, pleuritic symptoms succeeded upon the fever, and the blood that was taken away resembled that of pleuritics, at least for the first and second time, but in the course of the disease these signs of an extraordinary inflammation disappeared.

Its distinguishing symptoms.

2. Besides the usual symptoms of all fevers, this fever generally had the following: (1.) A violent pain in the head and back; (2.) a *stupor*, (3.) and tensive pain of the limbs, joints, and whole body, but somewhat milder than in a rheumatism; (4.) heat and cold succeeded alternately in the infancy of the disease, (5.) and sometimes also a great tendency to sweat accompanied it; (6.) when the fever was suffered to proceed according to its own nature, the tongue was not dry, and but little altered in its natural colour,

* *Was then more violent than in its progress, &c.* It is not at all improbable that the contents of the air, productive of an epidemic disease, are possessed of a much greater degree, both of virulence and activity, when they first begin to communicate their morbid impressions, than some time afterwards; and hence the disease occasioned thereby may be considerably more inflammatory and universal at the beginning, than in the progress and declension thereof.

But may not this circumstance more probably arise from the predisposition induced in the system, by the constitution of the air, rendering it more susceptible of the impressions made by the morbid effluvia, and more strongly favouring the production of the severity of their effects, than to any increase of virulence and activity inherent in them? I should rather be of the latter opinion, as we constantly see such great variation with respect to the malignity or mildness of diseases reigning epidemically, produced on different constitutions; besides, the great numbers thus attacked in the beginning favours this idea. *W.*

only

only it was whiter; (7.) the thirst was inconfi- Chap. 2.
derable; (8.) but when the heat was increased }
beyond the degree common to this fever, the
tongue appeared extremely dry, and of a deep
yellow colour, the thirst also was increased, and
the urine became intensely red, which otherwise
used to retain almost its natural colour. When
this fever was accompanied only with these symp-
toms, it went off on the fourteenth day, if skil-
fully treated; but when it proved very invete-
rate, it continued till the *one and twentieth* day.

3. Amongst the symptoms attending this fever, the principal one was a kind of *coma*,
which rendered the patient stupid and delirious,
so that he would doze sometimes for several
weeks, and could not be awakened without loud
noises, and then he only opened his eyes, and
directly after taking either a medicine, or a
draught of some liquid he was used to, fell into
a sleep again, which sometimes proved so very
found as to end in an entire loss of speech.

The princi-
pal one is a
kind of
coma.

4. When this symptom vanished, the patient
grew better on the *twenty-eighth*, or the *thirtieth*
day, the first sign whereof was the desiring or
longing for some odd and uncommon kind of
liquid or solid aliment. But the head continued
weak for some days, and nodded sometimes on
this and sometimes on that side; and there were
other signs, which manifested it to have been
greatly disordered: but in the same degree that
the strength returned, this symptom went off.

The first
sign of reco-
very.

5. Sometimes the patient did not sleep, but
was rather silently delirious, though at times he
talked wildly, as if in a passion; but the fury
never rose to so great a height, as is common in
a phrenzy in the small pox and other fevers;
from

Sometimes
a silent deli-
rium happen-
ed.

Sect. 5. from which it also differed in this particular, that he slept confusedly at intervals, and likewise snored more foundly. Neither was this symptom so acute as a phrenzy, but it continued longer, and chiefly affected children and youths, whereas that chiefly attacks grown persons. But in both, if heating medicines were given, and sweating promoted, the disease soon flew up to the head, and occasioned this symptom.

6. But where this symptom neither came spontaneously, nor was forced by medicine, the disease generally terminated in *fourteen*, and sometimes in *three* or *four* days, as I have occasionally observed.

7. In *autumn*, 1675, as we intimated above, this fever endeavoured to go off by a dysentery, and sometimes by a looseness; but the latter especially happened very frequently, whilst the *stupor* still continued: however, as far as I could learn from diligent observation, both these were only symptoms of this fever.

This fever
of a peculiar
kind.

8. To proceed to the cure: when this fever arose, *viz.* in *July* 1673, I immediately perceived it was of quite another kind, both from the various signs wherein it differed from those which accompanied the fevers of the preceding constitution, and from its not yielding to purging, by which I successfully cured all those fevers. Upon this account I employed more time than ordinary in searching into its species, and was *consequently under much perplexity in what manner to proceed in the cure.** For when this fever first

* *Under much perplexity in what manner to proceed, &c.* Our author here shews great caution in avoiding error in his proceedings, which might be fatal; and for want of proper circum-

first appeared, it had no epidemic cotemporary therewith, whose genius being thoroughly known, might enable me to discover somewhat of the nature of this; for the small pox which accompanied it, as I have before said, seemed to be the remains of the black small pox of 1670, and was now become very mild, and nearly extinct. I had no other way left, therefore, but to inquire carefully into this disease as it stood alone, and to use my best endeavours to find out

Chap. 2.

circumspection much mischief is daily committed by the rashness of indiscreet practitioners: but in all these cases, where the precise nature of the complaint lies hid, there are certain modes to be pursued, especially in such as are acute, where, if great good cannot be done, all mischief may be avoided. SYDENHAM here evidently shews he was directed by his theory, for he considered a particular degree of commotion of the fluids necessary to promote concoction, which if disturbed or weakened by any means, nature was prohibited in her operation, and a cure prevented; without, therefore, he knew the precise nature of the offending cause, he was at a loss how to act; he endeavoured on that account to discover what things seemed to assist, or what appeared to retard her efforts, and applied such a method of cure as was consistent with the known actions of the former. But by adverting to the constitution, and the effects produced upon it, without paying any regard to the *femina morbi*, we may always be serviceable in these cases; and for this purpose we must endeavour to bring the constitution into a state, as near the standard of health as possible; which will be done by obviating the difficulties as they arise in this or that part of the system; hence, in all cases, we are to support insensible perspiration; clear the stomach and intestines, by gentle means, of any superabundant load with which they may be oppressed; regulate the different secretions and excretions, and prevent the violent re-action of the system, or quicken the action of the motory powers where too torpid; by which means the constitution will be put into a state, the least capable of feeling the violent impulses of the morbid miasmata, or offending cause, and nature be empowered to execute her own office in the subduction of disease, by being freed, at least, from every constitutional obstacle. *W.*

a suit-

Sect. 5. a suitable method of cure, by always attending diligently to the *juvantia et lædētia*, i. e. to what made the patient better or worse.

Attended
with great
inflammation.

Repeated
bleeding bad.

Glysters,

9. The violent pain in the head, and the tendency there was to a pain in the side, together with the resemblance of the blood to that of pleuritics, soon shewed that this fever was accompanied with a considerable inflammation, notwithstanding which it would not admit of such large evacuations as are proper in a pleurisy; for after the first and second bleeding the blood intirely lost its fizy surface, and repeated bleeding did not at all relieve, unless, perhaps, the disease changed to a true pleurisy, which sometimes happened by using a hot regimen, especially during the first spring wherein it attacked, namely, in 1664, at which time being promoted by the approach of the sun, it seemed to tend to a kind of peripneumony, the disease being then in its infancy, and more spirituous than afterwards. Being deterred from repeated bleeding, by the ill success which attended it in some instances, notwithstanding this fever manifestly appeared to be of a very inflammatory nature, especially at its first coming, I had no other means left to mitigate the heat thereof, except the frequent repetition of glysters, *and the use of cooling medicines*.* Besides the symptoms that so apparently discovered an inflammation, the

* *And the use of cooling medicines, &c.* SYDENHAM has not mentioned what these were. Dr. SWAN, therefore, supplies this defect, by mentioning, nitre, crude sal ammoniac, Mindererus spirit, and diuretic salt; but gentle doses of antimonials would answer the purpose better; or they might be given in conjunction with these, or the saline mixture. *℞.*

Stupor,

Stupor, which happened oftener in this than in any other fever, indicated the frequent injection of glysters, in order to make a revulsion of the febrile matter from the head, which it was very apt to attack in this distemper; and they were substituted instead of repeated bleeding, which agreed not well with the nature of it, and supplied the want thereof by gradually and gently cooling the blood, and expelling the morbid cause. Chap. 2.

10. Moreover I judged that *large blisters applied between the shoulders* * must needs do more service in this than in other fevers, where the febrile matter does not equally affect the head; for by the violent heat and pain they usually occasion in the part whereon they are laid, the matter, which would otherwise fly up to the head, is derived thereto. By the use of these remedies, along with a cooling regimen, the disease at length yielded, as it were, naturally and spontaneously, how severely soever it raged, when it was treated by a different method; as plainly appeared to me from numerous instances. And blistering serviceable.

11. I proceeded, therefore, in the following manner: I first took away such a quantity of blood from the arm, as the strength, age, and other circumstances required, and then immediately applied a large blister between the shoulders. The next day I ordered a laxative The method of cure particularised.

* *Large blisters applied between the shoulders, &c.* In order to relieve this symptom of stupor, which arises from affections of the head, bathing the feet in warm water, or fomenting the inner and lower parts of the thighs, applying blisters there, and on the head itself, have been recommended as eminently serviceable, and proved from long continued experience. *W.*

glyster

Sect. 5.

glyster to be given so early in the afternoon (*viz.* about two or three o'clock) that the disturbance thereby occasioned might be quieted before the evening, and it was repeated every day till the disease abated, when I judged that glysters were to be omitted, and even sooner, if the fever continued after the *fourteenth* day; having found that they availed not after this time, even though the fever had not been conquered by those which had already been injected. For the violence of the disease, and the symptoms thereon depending, being now abated by the preceding ebullition, and the danger over, I judged it best to leave the disease to itself, to go off by degrees spontaneously. And this method always succeeded better with me, than the attempting some considerable evacuation at this time. In the mean while I forbade the use of flesh, but allowed small beer to be drank at pleasure.

The patient should rise every day, and why.

12. In treating of the regimen of this distemper I must not omit to observe here, that the patient should sit up at least some hours every day; much experience having shewn that this is of singular service. But if it be contra-indicated by great weakness, the patient should, however, put on his cloaths, and lie down on the bed with his head raised high. For having considered how violently the fever was carried up to the head, and also the inflammatory state of the blood, I conceived he might find some relief by placing the body in such a posture, as might prevent all increase of heat from the bed cloaths (which cannot be avoided if he lies constantly in bed) and check the course of the blood to the head, which increases the heat of the brain, and consequently heats and agitates the animal spirits, whence the heart beats quicker, and the fever rises higher.

13. But

13. But how serviceable soever it be in all fevers, attended with great inflammation, not to confine the patient continually in bed; yet it must be observed, that the sitting up too long at a time, particularly in the declension of the disease, disposes to flying pains, that may end in a rheumatism; and sometimes a jaundice is hereby occasioned. In these cases lying in bed is necessary; which opens the pores, so that the particles occasioning either of these disorders may be conveniently carried off thereby. But the patient is to be kept only a day or two in bed, without exciting sweat. These accidents, however, seldom happen, and never but in the decline of the fever; when, the disease being abated, it is much safer to let the patient lie constantly in bed, than in the beginning or height thereof; for at this time it forwards the digestion of the febrile matter, which is more exasperated and inflamed by an earlier confinement in bed.

Chap. 2.
But not sit
up too long.

14. But if it should be objected here, that this method, though it be proper enough to divert the course of the blood from the head, and cool the patient, is nevertheless improper, because it checks the evacuation by sweat, whereby the febrile matter, now concocted, should be wholly expelled; I reply, that the objection is of no force, unless it be first proved that this kind of evacuation is necessary in every fever, which cannot easily be done. *For experience, not reason, points out* * which species of fevers is to be cured by

The method
of cure vin-
dicated.

* *For experience, not reason, points out, &c.* SYDENHAM, by the word reason in this place, means reasoning a priori; reasoning founded on hypothetical data: for mere experience, unsupported by reason, is empiricism—practice

Sect. 5. by sweat, and which by purging, &c. Moreover, it is not improbable that there are some kinds of fevers, which nature cures by a peculiar method of her own, without any visible evacuation, *viz.* by moulding and assimilating the morbid matter in the blood, with which it did not well mix. And going upon this principle, I have often cured this and other sorts of fevers (provided they were not intermitten) in the beginning, before the whole mass of blood was vitiated, only by directing small beer to be drank at pleasure, forbidding broths, and every other kind of aliment, allowing the patient the use of his ordinary exercise, and the open air, and not so much as once using any evacuation.

is best founded on the coincidence of these two principles. In almost all fevers, where the morbid matter is suffered to fix in the habit, and produce its full effects, we find the miasmata have some predilection in making its exit at a proper time, more for one part of the system than the other: the small pox and measles, and some other eruptive fevers, for the skin; the plague for the glands, particularly the inguinal and axillary; the dysenteric fever for the intestines, &c. Of these facts we are certain: but how are we to discover, when patients are attacked with any of these fevers, that they will terminate in this or that way? By faithful histories transmitted to us from the observation of others. Hence, if we find that similar symptoms arise, under similar circumstances, we are to expect similar conclusions; and reason directs us to avoid disturbing nature in her common course, by attempting to direct her efforts to parts of the system, inconsistent with the known election; and to exert our efforts to pave the way for the expulsion of the morbid matter by those outlets of which she always, in these particular cases, makes use: at the same time observing, that the means employed shall be so conducted, that the critical discharges shall be promoted by the easiest method possible, that the otherwise salutary effects may not be productive of mischief, and become, instead of a cure of one, the cause of other diseases. Reason thus acquired, is the best medical pilot, and ever must be held Experience's best associate. *W.*
Thus

Thus I have cured my children and intimate friends, by making them fast strictly for two or three days;* but this method is only to be used in young persons, and such as are of a sanguine constitution. Chap. 2.

* *By making them fast strictly two or three days, &c.*

This requires not the pompous parade of great names to give it force, on the slightest reflection we must be convinced of its truth, if we consider the state of the constitution labouring under acute fevers; for we find the whole system in such a state of disturbance, that few of its functions are performed regularly and perfectly. All its efforts seem to be fully employed in conquering the powerful enemy; hence should it be left at full liberty to accomplish its purposes with ease and celerity; and what can contribute more to this than fasting? The ridiculous idea of patients wanting support under those circumstances, and for that purpose pouring in loads of nutritious viands, can only live in the brain, and be the result of the most consummate ignorance. For after eating we find febrile affections in a greater or less degree succeed; and more so in proportion as the digestive powers are in a weakened state. Now the constitution being already oppressed by disease, and these powers debilitated, food adds considerably to the accumulation of mischief by increasing the stimulus in the habit, loading the stomach, filling the machine with crude humours, and laying an additional stress upon the motory powers, by which means re-action in the habit is increased, and all the febrile symptoms aggravated; which we constantly see happen in hectic patients, particularly if food is taken a little time before the usual exacerbations: here, then, the constitution has to militate against two evils; and if the practice is continued, increases and prolongs the disease; so happens it in all acute fevers; on the contrary, fasting entirely prevents the one, and from leaving the constitution at liberty to exert its full power, supplies it with the best opportunity of subduing the malady. HIPPOCRATES, as quoted by Dr. Swan, was so sensible of the great utility of temperance, that he says, "Abstemiousness in eating and drinking is a preservative from all diseases;" and in another place, "that nothing is more conducive to health than to eat sparingly, and use exercise."—*W.*

Sect. 5.
 What kind
 of sweat is
 to be pro-
 moted in
 fevers.

15. But if it be granted, that nature can conquer the disease no otherwise than by sweat, ought it not to be understood of the sweat that appears in the decline of the disease, in consequence of the previous digestion of the peccant matter, and not of that which is forced in the beginning, and proceeds from disturbing the procedure of raging nature? I conceive that such a sweat is not to be promoted, but contrariwise, that the disturbance whence it proceeds, is rather to be quieted: this kind of sweat usually accompanies many, though not all sorts of fevers. But I am well aware, that some kinds of fevers naturally require this sort of critical sweat at their declension; such are the particular fits of intermittents, and likewise the great and most frequent fever of nature, arising from that constitution which only tends to produce intermittents epidemically. For if any method be followed, which does not tend, (1.) to digest the morbid matter, and (2.) to expel it by sweat, the disease will be increased thereby; so that no evacuations must be used here, unless inasmuch as they moderate the violence of the disease in the beginning, for fear of occasioning the death of the patient during the course of the cure. Moreover, the cause of a pestilential fever, as it is of an exceeding subtiler nature, may be carried off by sweat on the first days of the illness, as experience universally shews.

In what fevers sweating is prejudicial.

16. But in those fevers, wherein we never find, by the common course of the symptoms, and when they are suffered to proceed according to their own genius, that nature is used to discharge the morbid matter, now prepared, in
 a limi-

a limited time, it would be very imprudent to attack the disease, and endeavour to cure it only by promoting sweat, since, as *Hippocrates* observes, *it is in vain to oppose the motions or tendency of nature.** And I conceive this ought to take place in the fever under consideration, which I know by much experience may be cured without sweat, and likewise that, whilst we endeavour to force it unseasonably, the life of the patient is unnecessarily endangered, by the morbid matter being translated to the head. But, however, no prudent physician will reckon it a trifling advantage, either in this or any other fever, not excepting such as are not usually terminated by a *critical* sweat, if such a kind of sweat should by accident succeed spontaneously upon the abatement of the disease, since by the remission of all the symptoms this sweat may be esteemed to proceed from a due concoction of the febrile matter. But when it does not appear spontaneously, what assurance have we, that the patient will not be destroyed, whilst we endeavour by a hot regimen and car-

Chap. 2.

* *It is in vain to oppose the motions and tendency of nature, &c.* It is something more than vain, it is always dangerous, and very often fatal, to make the attempt. In the confluent small pox, what can compensate for stopping the ptyalism? What the tendency to cuticular eruptions in the distinct? In the plague, how can the injury be repaired, should we endeavour to prevent the formation of buboes, carbuncles, anthracis, &c.? In the dysentery, how are the succeeding mischiefs to be avoided on prematurely putting a period to the intestinal flux? This is an observation ever closely to be attended to.—See the latter part of our note, pag. 305.—Notwithstanding which, in many fevers the natural progress may be with safety prevented; the duration greatly shortened, and the dangerous tendency altogether avoided, by the means specified note *, pag. 44. W.

Se^ct. 5. diacs to dispose the humours to sweat? Should a person by chance find something of value in his way, he would doubtless stoop to take it up, unless he were a fool; but he must needs deserve that character, who, having had this good fortune, should use his utmost endeavours to obtain such another prize with the hazard of his life. Be this as it will, it is apparent to me, that the fever alone is attended with a sufficient degree of heat to prepare the febrile matter for concoction, and needs no additional heat from without, by means of a hot regimen in order thereto.

Bleeding and glysters successful, but diaphoretics bad, in this fever.

17. I have found the above-mentioned method of bleeding and injecting glysters very successful in the cure of this fever; whereas contrariwise sudorifics not only occasioned anomalous symptoms of a bad kind, but likewise rendered the cure uncertain. The capital symptom in this fever was the silent *delirium*, which did not manifest itself so much by talking wildly, as by a *stupor* resembling a *coma*, which, as we said above, often happened in this fever. I have sometimes known it come spontaneously, but it is generally occasioned by the ill-timed over-officiousness of nurses in raising sweat, whereby the morbid matter (which in this kind of fever does not admit of expulsion of sweat) is put into a violent motion, and at length flies up to the head, to the endangering the life of the patient.

18. I have already remarked, in treating of the cure of the fever of another constitution, that in the latter years of its prevalence a *stupor* of this nature chiefly affected children and such as were under fourteen years of age; but that

was

was neither so considerable, nor so epidemic, as the *stupor* which accompanied the present fever. Yet I could not conquer the first, and much less the last, in the beginning of the fever, though I used all possible endeavours, by repeated bleeding both in the arms, neck, and feet, blistering, cupping, giving glysters and sudorifics of all kinds, and the like; so that at length I determined, after bleeding in the arm, to apply a blister to the neck, and throw up two or three glysters of milk and sugar in the beginning of the illness, without doing any thing more than forbidding the use of flesh and all kinds of spirituous liquors: in the mean time I attended the procedure of nature, and by following her steps learnt at length how to conquer this symptom; for the disease went off safely, though slowly. Upon this account I judged it necessary to pursue this method in all the fevers I have since treated, and look upon it as a thing of great importance, if the greatness of the symptom, and the constant success attending it be considered.

Chap. 2.

The *stupor* yielded to nothing in the beginning.

19. And in reality I have sometimes thought, that we do not proceed slowly enough, and ought to use less expedition in removing distempers, and *that more is frequently to be left to nature,* than is usual in the present practice.*

Haste in curing diseases sometimes pernicious.

For

* *And that more is to be left to nature, than is usual in the present practice, &c.* Whatever reason our author might have for this accusation in his time, at present there is no foundation upon which such a charge can be supported; for no man, as far as I know, who merits the name of a physician, ever attempts, when *a fever is perfectly formed*, to prevent nature from exercising her own powers. I believe it is the uniform practice to obviate only the difficulties

Señ. 5. For it is a grand mistake to conclude that nature always wants the assistance of art; for if that were the case, she would have made less provision for the safety of mankind than the preservation of the species demands; there being not the least proportion between the multitude of diseases and the knowledge men were endowed with to remove them, even in those ages wherein the healing art was at the highest pitch and most cultivated: what it may do in other diseases, I cannot say; but I am convinced from diligent observation, that in the fever under consideration this symptom, after using the general evacuations, *viz.* bleeding and glysters, was successfully conquered by time alone.

Improper diet, when to be indulged.

20. It has been already observed that the sign of recovery did not usually appear till the *thirteenth* day, when the *stupor* was considerable, and attended with a loss of speech; and then the patient earnestly longed for some odd kind of liquor or solid aliment, the ferment of the stomach being greatly vitiated by the long continuance of the fever. Now in this case, though the patient was so weak as to need a restorative diet, yet I willingly allow such things as were less proper; provided they were more grateful to the palate.

ties as they arise, in order that nature may pursue her own steps with the utmost regularity and certainty. To endeavour to correct the errors of unskilful practitioners, to whom Dr. Swan alludes, who steer without rudder or compass, would be a work more severe than the labour of Hercules in clearing the Augean stable, vanity and self-consequence, those constant associates of the ignorant, are perpetual bars to conviction and reformation. With regard to the folly and impatience of mankind, of which the Doctor also complains, see our note *, pag. 49.—W.

21. In

21. In *September*, 1674, I attended the son of Mr. *Not*, bookseller, a youth of nine years of age, who was afflicted with this fever, accompanied with the above-mentioned symptoms. After bleeding in the arm, and injecting glysters every day in the beginning of the illness, the mother earnestly importuned me to hasten the cure more than I judged consistent with the safety of her child, and therefore I refused to comply with her request. Having accordingly gained time, I directed only a common julap; which I did rather to please the mother, than to relieve the son. On the *thirtieth* day he began to mend, and earnestly desired several odd kinds of eatables, some of which were indulged him upon this account, *though they ought not otherwise to have been allowed*; * and by this means he at length recovered.

Chap. 2.
History of a
cure.

22. But

* *Though they ought not otherwise to be allowed, &c.* Under these circumstances a physician, even of the first eminence, stands very often in an aukward predicament; he knows, that frequently gratification in things apparently improper, according to medical reasoning, have been serviceable, which perhaps is owing to a quietude of mind resulting from such gratification, and therefore will not refuse his consent, if certain the desire predominant in his patient is real, not the effect of whimsicality: but it is often more the result of the latter than the former; should he therefore accede to the solicitation of the indisposed, often warmly supported by friends, and any disagreeable consequences arise, he becomes culpable in their eyes, and his judgement called in question; nay, even their opinion is ratified by some of the faculty, who have the tale delivered to them in a mutilated form. In this situation much caution is necessary. If I ever consent to such requests, I order, whatever it is they have desired, at first to be tried with a sparing hand, and proceed accordingly; at the same time assuring the patient, my leave is obtained more in conformity

Sect. 5. 22. But though this comatous kind of *stupor* oftener accompanied this fever than the other symptoms, yet sometimes, though rarely, a *delirium* happened without a *stupor*, in which the patient slept neither night or day, and was un governable, and was seized with other symptoms, resembling those which affect delirious persons either in the small pox or in other fevers. This symptom would not admit of palliation, like the comatous disorder just mentioned, till concoction could be performed, but proved fatal in a short time, unless the inflammation was abated. In this case, *spirit of vitriol* did more good than any thing else, so that, after bleeding, and injecting a glyster or two, I allowed it to be dropt into small beer for common drink: and in a few days it disposed the patient to sleep, and having removed the symptoms, restored him to health, which indeed I was not able to effect by any other method. And this was manifest to me by much experience.

Sometimes a *delirium* with a watchfulness, &c. happened in this fever.

Spirit of vitriol most effectual in removing these symptoms.

23. In *Autumn*, 1675, dysenteric stools, and sometimes a looseness succeeded this fever, which I presently perceived were *symptomatic*, and not *original* disorders, as in the preceding constitution. But notwithstanding, as the cause of the disease was contained in the mass of blood,

to his solicitude, than from any opinion I have of the propriety of the indulgence: thus have I sometimes escaped the censure of fools and the malevolence of the illiberal. —For notwithstanding the great difficulty, the laborious study, the constant attention, the accurate observation, and uncommon sagacity necessary for acquiring a competent knowledge of, and practising with tolerable success, the medic art, there is no character which experiences more abundantly the abuse of presuming ignorance than the physician. *W.*

bleeding

bleeding was indicated, which, with the assistance of two doses of an opiate afterwards, proved sufficient to overcome this symptom. Chap. 2.

24. In *September*, 1675, I was called to Mrs. *Conisby*, who was seized with this fever, which was suddenly followed with gripings, and these by bloody and mucous ejections. Though her strength was much exhausted by the long continuance of the disease, and especially by the frequent stools which had greatly fatigued her the preceding night, I directed bleeding in the arm immediately, and soon after gave an opiate, after which there appeared natural stools the same evening. I repeated the opiate the following morning and evening, and ordered a gentle cardiac to raise the spirits; and by this treatment she soon recovered. The dysentery succeeding this fever, how conquered.

25. As to the *diarrhœa*, which frequently happened in this fever, about this time of the year, it occasioned little inconvenience; and as it neither proved serviceable, nor prejudicial, as far as I could perceive, whether there was a *stupor* or not, so it furnished me with no indication, provided it was not so violent as to endanger the life of the patient, in which case an opiate was clearly indicated; and in this symptom only is the use of anodynes to be approved throughout the course of this disease; for the extraordinary tendency to a *stupor* in this fever was increased by medicines of this kind, consequently they were not to be given without an absolute necessity. The looseness succeeding it, how cured.

26. It must be observed, that it often happens that those persons who recover after this and other fevers, especially such as have been much exhausted by its long continuance, and have required Night sweats whence, and how cured.

Sect. 5. required large and tedious evacuations to complete their cure (particularly if they were also of a weak constitution) do, as they lie in bed at night first grow hot, and then fall into a profuse sweat, whereby they are greatly debilitated, and recover strength slowly; and some likewise fall into a consumption. As I conceived that this symptom proceeded only from the blood's being so impoverished and weakened by the continuance of the preceding illness, that it could not assimilate the juices lately taken in, but endeavoured to expel them by sweat; *I ordered that the patient should take five or six spoonfuls of old Malaga sack, morning and evening, whereby the strength increased daily, and the sweat vanished.* And thus we have finished our discourse of the continued fever of this constitution, which we chuse to call the *comatous fever*, on account of the great *stupor* which generally accompanied it:

C H A P. III.

Of the Measles of 1674.

The rise of
a new species
of the
measles. I. **I**N January, 1674, there arose a different kind of the measles † from that which began in the same month, in 1670, and yet it proved as epidemic,

* *I ordered that the patient should take, &c.* A restorative diet, proper exercise, and the use of a *light infusion of the bark in red wine*, will seldom fail of producing the desired effect in this case. *Elixir of vitriol* is also esteemed an excellent medicine for the same purpose.

† *There arose a different kind of measles, &c.* This is the *rubeola anomala* of SAUVAGES, and the first variety of the *rubeola*

demic, but was not equally regular, nor so constantly kept its several stages; for sometimes the eruptions came out earlier, and sometimes later; whereas in the other kind they always appeared on the *fourth* day inclusive from the beginning of the illness. Again, the eruptions here appeared first on the shoulders, and other parts of the trunk; but in the other species they first shewed themselves in the face, and by degrees spread over the rest of the body. In this species likewise I seldom found that the skin peeled off like branny scales upon the disappearance of the eruptions, which happened as certainly in the other kind, as after a scarlet fever. Moreover, this sort proved more destructive, when unskillfully treated, than the former; for the *fever* and *difficulty of breathing*, which used to succeed at the close of the distemper, were more violent here, and resembled a *peripneumony* more. But though this species of the measles was anomalous and irregular, with respect to the symptoms just mentioned, yet in general the description of that of 1670 agreed pretty well therewith; which need not therefore be repeated here. This kind also, like the former, increased till the *vernal* equinox, from which time it abated, and at length vanished, at the approach of, or soon after, the *summer* solstice.

rubeola vulgaris of Dr. CULLEN; see note, pag. 255; on which there will require no animadversion, as this species differs only from that treated of before, in the symptoms being more severe, and its progress not so regular. What has been offered on that subject, asks in this place for no variation; hence our reader is referred back to pag. 255-*W.*

.2. As

Sect. 5. 2. As the method of cure differs little from that which is amply delivered above in the history of the measles, it is to be sought for there; and I will only give a single instance hereof in this place, according to my custom.

The method of cure, whence to be taken.

Exemplified in some children.

3. In *February*, 1674, the Countess of *Salisbury* sent for me to one of her children in the measles, which the rest, to the number of five or six, soon afterwards caught, and I treated them all in the same manner. I ordered they should lie in bed for two or three days before the eruption, that the blood might breathe out through the pores the particles occasioning the distemper, which were easily separable from it. But I allow them no more cloaths, nor a larger fire, than they were accustomed to when in health. I forbade the use of flesh, and permitted them to sup water gruel, and barley broth, and between whiles to eat a roasted apple, and I gave them small beer, or milk boiled with thrice its quantity of water for drink. I also prescribed a pectoral ptisan, as usual, to be drank occasionally, as the cough proved troublesome. By this means they recovered in the short time wherein this disease ordinarily terminates, and were not seized with any symptom which is not common in the measles, throughout the course, or after the departure thereof.

The origin of a morbillous fever.

4. During the first two months in which this kind of measles prevailed, a kind of *morbillous fever* intervened in a few subjects, attended with some eruptions in the body, but especially in the neck and shoulders, resembling the measles, from which however they differed in being confined to the parts above mentioned, and not seizing the whole body: The fever also, though
mani-

manifestly of the same kind, was more violent, Chap. 3. and lasted *fourteen* days, and sometimes longer. It admitted neither bleeding nor glysters, being exasperated by both, but readily yielded to the method adapted above to the measles.—And let this suffice for the measles.

Bleeding and glysters bad therein.

C H A P. IV.

Of the anomalous Small Pox of 1674, 1675.

1. **A**S the *epidemic measles*, which appeared in the beginning of the year 1670, introduced the *black small pox* there described; so that kind which arose in the beginning of 1674, and proved equally epidemic, introduced a sort of small pox, so extremely like the former, that it seemed to be the same revived, and not a new kind. For as we have before observed of that sort of small pox, that after the first two years of its prevalency the pustules became daily less black, and grew larger by degrees, till the end of the year 1673, when the disease was mild and gentle, considering the kind, it now returned again with its former violence, and attended with a train of destructive symptoms. For in the *flux kind* the pustules appeared of a sooty blackness, unless the disease proved fatal before they came to suppuration; for whilst they ripened they were only of a brown colour. Moreover when the pustules were numerous, they were very small (for where very few appeared, they were of the same size as in other kinds of the small pox, and were rarely black) and nearly resembled that kind above described which prevailed

The return of the black small pox.

sect. 5. vailed in 1670, differing only in a few particulars, which shewed that this sort was attended with a greater degree of putrefaction, and of a grosser and more indigestible nature: for when the eruptions came to maturity, they were much more fetid than in the other kind, insomuch that I could scarce bear to approach such as were very full, the stench was so offensive. They also run through their stages slower than any other species I had hitherto seen.

The milder
the kind the
sooner the
pustules
suppurate.

(2.) It is worth observing, that the milder the kind is, the sooner the eruptions come to suppuration, and the disease is terminated. Thus in the regular species of the *confluent small pox*, that began in 1667, the *eleventh* day was attended with most danger, after which the danger was generally over. In the next succeeding irregular species of the *confluent small pox*, which arose in the beginning of 1670, the *fourteenth*, or at farthest the *seventeenth* day, proved most fatal, which if the patient survived, he was in no further danger; for I never knew a person destroyed by this disease after the *seventeenth* day. But in this sort of the *confluent small pox*, there was danger after the *twentieth* day; and sometimes if the patient recovered, which happened to few, the ankles not only swelled, which is common in every species of the *confluent small pox*, but the shoulders, legs, and other parts; and these swellings begun with intolerable pain, like a rheumatism, and frequently came to suppuration, and terminated in very large sinus's and imposthumes in the muscular parts; so that the patient's life was greatly endangered for several days after the small pox was gone off. Hence I clearly perceived by what

what degrees this epidemic distemper advanced through these constitutions, the latter whereof always exceeded the former, both in the degree of putrefaction, and the indigestible state of the morbid matter. Chap. 4.

3. *But the small pox whereof I now treat,** seems to me to be a new sort arising from the former, now in the decline. For though, according to the tendency of the air productive of this epidemic, the *black* small pox, which first appeared in 1670, had arrived at its declension, yet, like a relapse of some disease caused by the fresh fermenting of the former matter, the air being again disposed to produce the *small pox*, brought it back; and the disease being renewed, and ha-

This small
pox seems to
be a new
kind.

* *But the small pox whereof I now treat, &c.* This species is arranged by Sauvages under those of the confluent sort; styled *variola confluentes malignæ*, itself named *variola confluens nigra*, which term is retained by Dr. CULLEN, and placed under *variola confluens*, which he briefly and generally defines,

“The small pox with pustules numerous, confluent, irregular in their circumference, flaccid, and slightly elevated; the fever continuing after the eruption.”—*Synopsis Nosologiæ Methodicæ*, pag. 132, 134.

SAUVAGES says, the character of the *variola confluens nigra* arises from the pustules being black, pouring out black blood, the bottom gangrenous, the urine bloody; attended also with various hæmorrhages, the spaces between the pustules being also black. The prelude is similar to that of other malignant fevers, the eruption beginning on the second day, the pustules slightly elevated, and of a blackish colour; if perforated, there is an effusion of black, livid cruor; the urine is for the most part bloody; the intestinal evacuations, urine, spitting, vomitings, and tears also, in some are sanguineous; the interstices between the pustules are black; the fever and paroxysms violent: this species is fatal commonly on the second or third day.—*Nosologia Methodica*, vol. ii. p. 428. *W.*

Sect. 5. ving obtained fresh force, seemed clearly to revive, and in a manner to grow young again. And this kind proved so much more irregular, and was accompanied with greater putrefaction, in proportion as the matter occasioning it was grosser and fouler than that which produced the preceding kind. Now, to render this still more manifest, we must not imagine there is the least necessity of such a disposition in the air, as may propagate a particular epidemic in one place, and a very different one in another not far distant from it; but if this were the case, as it sometimes is, every motion of the winds would have a power of spreading a constitution. But I conceive it more probable, that a certain particular tract of air becomes replete with *effluvia* from some mineral fermentation, which infecting the air through which they pass, with such particles as prove destructive sometimes to one kind of animals, and sometimes to another, continue to propagate the diseases peculiar to the various disposition of the earth, till the subterraneous supplies of those *effluvia* fail; which may likewise undergo a new fermentation from the remains of the old matter, as in the case just mentioned.

Was of a grosser, and more putrefactive nature.

4. But whether this or any other hypothesis may better serve to solve the phenomena, is equal to me, who pretend to know nothing more than is clear from the fact itself. Of this however I am certain, that the present small pox exactly resembled that of the preceding constitution; only it seemed to be of a grosser nature, and attended with a much greater degree of putrefaction. And from these two causes it followed, that when the eruptions were very confluent, it destroyed abundance more than any other

other sort I had hitherto seen; and in my opinion, was as fatal as the plague itself, with respect to the numbers it affected: though, when it proved the distinct kind, it was not more dangerous than any other sort, and by the size and colour of the pustules, and other particulars, appeared to be a good sort. Chap. 4.

5. With respect to the cure, I have long wondered to find such manifestly contrary indications, as this disease seemed to exhibit. For it was very evident that a hot regimen immediately caused such symptoms as proceed from a too violent inflammation, *viz.* a *delirium*, purple spots, and the like, whereto this disease is chiefly subject; and contrariwise, too cool a regimen prevented the swelling of the face and hands, which is highly necessary here, and sunk the eruptions. But after a long and thorough consideration of these matters, I at length found that I could remedy both these inconveniencies at the same time. For by allowing the free use of milk boiled with three parts of water, small beer, or some similar liquor, I was enabled to check the commotion of the blood; and, on the other hand, by keeping the patient constantly in bed with his arms covered, the filling of the pustules and the swelling of the hands and face were promoted by the moderate warmth thereof. Nor does this method contradict itself; for after the eruption is over, it is to be supposed that the blood hath thrown out the inflamed particles upon the habit, and therefore needs no *stimulus* in order to a further secretion of the matter; so that, as the principal affair lies now in the habit of the body, and promoting the suppuration of the pustules, all that is to be done, with

Intimated
contrary cu-
rative indi-
cations.

The method
of cure spe-
cified.

Y 2

respect

Sect. 5. respect to the blood, is, to prevent its being injured by the hot vapours that may strike in from the skin covered therewith; and with respect to *pustules*, they are to be brought to suppuration by the gentle heat of the external parts.

It failed in this species of small pox.

6. But though this method succeeded well in the other kinds of the confluent small pox, it nevertheless failed in that of this constitution; for most of those died who had it in a violent degree, whether they were treated by my method, or by the hot regimen and cardiacs. I was very sensible therefore that, besides the medicines which served to check the ebullition of the blood, or promote the elevation of the pustules, and the swelling of the face and hands, there was further required a medicine of sufficient force to overcome the putrefaction, which appeared to be much greater in this sort than any other I had observed. *At length I thought of spirits of vitriol,** which I conceived might answer both intentions, viz. (1.) check the progress of the putrefaction, and (2.) mitigate the vehement heat. Whereupon, leaving the patient to himself without doing any thing till the pain and vomiting pre-

A different one set down, which succeeded.

* *I thought of spirit of vitriol, &c.* It is beyond any doubt that this disease is of the highly putrefactive kind, and requires the liberal use of tonics and antiseptics, on which alone we can build any the least flattering hopes of success: bark added to the spirit of vitriol renders it more powerful; and in cases of idiosyncrasy, alum, saccharum saturni, myrrh, camomile, &c. may supply the place; and such other methods ought to be pursued, as in cases of putrid fevers, adapting the remedies to the violence and urgency of the symptoms.

The spiritus vitrioli dulcis in these cases is likely to prove a very valuable medicine, as given by Dr. Carmichael Smith, —see his account in the *Medical Communications, London*, vol. i.—H.

ceding

ceding the eruptions were gone off, and all the pustules came out, at length on the *fifth* or *sixth* day I allowed small beer, gently acidulated with *spirits of vitriol*, to be taken at pleasure for common drink, recommending it to be drank more plentifully upon the approach of the suppuratory fever, and the use of it to be continued daily till the patient recovered. Chap. 4.

7. This spirit, as if it were truly a specific in this disease, surprisngly abated all the symptoms; the face swelled earlier, and in a greater degree, the spaces between the eruptions inclined more to a bright red colour, like that of a damask rose; the smallest pustules also became as large as this kind would allow; and those, which had otherwise been black, discharged a yellow matter, resembling a honey comb; the face, instead of being black, appeared every where of a deep yellow; lastly, the eruptions came sooner to suppuration and ran through all their stages a day or two sooner than usual. In this manner did the disease proceed, provided the patient drank freely of the liquor above commended; so that when I found there was not enough of it drank to take off the symptoms, I exhibited some drops of the *spirits of vitriol* between whiles, in a spoonful of some syrup, or a mixture of some distilled water and syrup, in order to make amends for the sparing use of the above-mentioned liquor. *Spirit of vitriol* commended.

8. I have now enumerated the many advantages of this medicine, and indeed I have not hitherto found the least inconvenience from the use thereof; for though it mostly stopt the salivation on the *tenth* or *eleventh* day, yet some stools usually succeeded at this time instead of No inconvenience attending the use thereof.

Se&t. 5. it, which were less dangerous than that stoppage; for as we have often mentioned, such as have the confluent small pox are principally endangered on these days, because the *saliva*, being rendered more viscid, does then threaten suffocation. But in the present case, this symptom is relieved by the looseness, and either goes off spontaneously, or is easily cured by the milk and water, and an opiate, when the danger from the small pox is quite over.

The patient not to lie always in the same place in bed.

9. Though the patient by my order kept his bed during this time, and his arms in bed, I suffered no more cloaths to be laid upon him than he was accustomed to when in health; and permitted him to change place as often as he pleased, to prevent his sweating, to which he was extremely subject, notwithstanding this remedy. In the mean time he supped water gruel and barley broth, and sometimes eat a roasted apple. Towards the decline of the disease, in case of faintness, or sickness at stomach, I allowed three or four spoonfuls of canary; but after the *fifth* or *sixth* day I ordered a composing draught (earlier than usual) every evening for grown persons, for children had no occasion for it: the draught was *fourteen drops of liquid laudanum* in a little cowslip water.

The regimen.

Bleeding and purging, when to be used after the small pox is gone off.

10. On the *fourteenth* day I allowed the patient to rise, on the *twenty-first directed bleeding in the arm*,* and then purged him twice or thrice, after

* *Bleeding in the arm, &c.* Though purging in this species, as well as all others of the small pox, is absolutely necessary at this period, yet bleeding in general cannot be proper, indeed in most cases it will prove prejudicial, for the system being already too much debilitated by the nature and violence of the preceding disease, cannot require any

after which he had a better colour, and looked Chap. 4.
 brisker than those usually do whom this disease }
 has so severely treated. Besides, this method
 generally preserved the face from those unseemly
 scars, which are occasioned by the corrosion of
 the skin from hot humours.

11. On the twenty-sixth of *July*, 1675, Mr. *Elliott*, one of the grooms of the bed-chamber The method
exemplified
in a grown
person.
 to the king, committed one of his servants to
 my care, who had this ill-conditioned sort of
 black small pox coming out. He was about
 eighteen years of age, of a very sanguine con-
 stitution, and was attacked with this distemper
 soon after hard drinking. The pustules were of
 the confluent kind, and ran together more than
 any I had hitherto seen, so that scarce any in-
 termediate space was left between them. Rely-
 ing upon the virtue of this efficacious medicine,
 I omitted bleeding, though I was called in soon
 enough to have done it, and ought indeed to
 have ordered it, as the disease was occasioned
 by drinking too much wine. When the erup-
 tion was over, *viz.* on the *fifth* or *sixth* day, I
 ordered *spirit of vitriol* to be dropped into some

any mode which would contribute so much to increase that
 debility. I scarce can conceive that any case can arise where
 this operation is requisite, a bland restorative diet, air, and
 exercise, seem the best things calculated to subdue the acri-
 monious state of humours, give fresh vigour to, and renew
 the tone of the system: but should such cases ever occur
 which may call for the use of the lancet, it would be right
 to give particular descriptions of them, and advance sub-
 stantial reasons to authorise the deviation from the common
 rules which influence our conduct, supported at present by
 the consent of general practice, and established apparently
 on the most rational principles. *W.*

Sect. 5. bottles that were filled with small beer, and allowed this liquor to be drank at pleasure for common drink. On the *eighth* day he bled so much at the nose, that the nurse, terrified by this symptom, sent in great haste for me. And as soon as I came, perceiving that this hæmorrhage arose from the immoderate heat, and unusual commotion of the blood, I ordered him to drink still more freely of the acidulated small beer, whereby the flux of blood was soon stopt. The salivation being plentiful enough, and the swelling of the face and hands, and the filling of the pustules proceeding in a proper manner, the disease went on very well, except that in the decline thereof some bloody and mucous stools succeeded, which might have been prevented perhaps by bleeding in the beginning, for the reason above mentioned. Nevertheless I used no other medicine in the *dysentery*, but the composing draught, which I should have ordered to be taken every evening, if this symptom had not happened; and by this means it was checked, till the eruptions went off; and afterwards, upon taking away a sufficient quantity of blood from the arm, and drinking plentifully of milk and water, the patient soon recovered.

In two children.

12. About the same time, Mr. *Clinch*, a neighbouring gentleman, committed two of his children to my care; one was four years of age, the other suck'd, and was not six months old; the eruptions were very small and confluent in both and of the black kind, and came out like an *erysipelas*. I directed *spirit of vitriol* to be dropt into all their drink, which, notwithstanding their tender age, they drank without any aversion;

aversion; and not being seized with any worse symptom, they soon recovered. My intimate friend, Dr. *Mapletoft*, accompanying me to visit them, found the eldest recovering, and the youngest then lying ill in the cradle. Chap. 4.

13. But it must be noted, that as the distinct sort of the *small pox* of this constitution was very mild, it needed not this remedy; the method we have before laid down, for the treatment of the distinct kind, sufficing here. Spirit of vitriol was unnecessary in the distinct kind.

14. I have now given the reader all my observations relating to the *small pox*; and though they may perhaps in this censorious age be esteemed of little moment, yet I have with great pains and care spent many years in making of them; nor had I now published them, if a design of benefiting mankind had not induced me to it, even at the expence of my reputation, which I am sensible will suffer on account of the novelty of the method. And yet I cannot conceive why a new way of curing a disease, not to be met with in *Hippocrates*, or *Galen*, (unless perhaps some passage in their writings have a forced interpretation put upon it) should be disliked, since the methods of cure appropriated by the modern physicians, not having been established by those two great lights of physic, may as reasonably be rejected by some, as magnified by others. The *small pox* not to be met with in *Hippocrates* or *Galen*.

15. And for the same reason it should not seem strange, that I have made some alteration in the method of curing those fevers, which depend on such constitutions as are epidemic with the *small pox*. For if the *small pox* never appeared in those early ages, it follows likewise that such fevers never existed. Now it is highly probable

Sect. 5. } probable there was no small pox to be found at that time; for if this distemper had been as common then as it is now, I am of opinion it could not have been concealed from the sagacious *Hippocrates*, who, as he understood the history of diseases better, and has described them more accurately, than any of his successors, would also have left us, (according to his custom) a plain and genuine description of this disease.

Diseases have certain periods, and whence.

16. Hence therefore I conjecture, that diseases have certain periods, resulting from the secret and hitherto unknown alterations happening in the bowels of the earth, that is, according to the different age and continuance of the same. And that as some diseases have existed in former ages, that are now either quite extinct, or at least appear very seldom, as being wasted with age, such as the *leprosy*, and perhaps some others; so the diseases which now prevail, will at length vanish, and yield to other new species, of which indeed we can form no idea. This may be the case, whatever notions we form of this matter, who were born, as it were but yesterday, and to-morrow perhaps may die; nor are the practical observations of the ancients of much longer standing, if compared with the beginning of the world.

C H A P. V.

Of the epidemic Cough of the Year 1675, and the Pleurisy and Peripneumony which followed upon it.

The rise of an epidemic cough.

I. **I**N 1675, the season having continued unusually warm, like summer, till towards the end of *October*, and being suddenly succeeded by

by cold and moist weather, a cough became more frequent than I remember to have known it at any other time; for it scarce suffered any one to escape, of whatever age or constitution he were, and seized whole families at once. Nor was it remarkable only for the numbers it attacked (for every winter abundance of persons are afflicted with a cough) but also on account of the danger that attended it. For as the constitution, both now and during the preceding autumn, eminently tended to produce the epidemic fever above described, and as there was now no other epidemic existing, which by its opposition might in some measure lessen its violence, the cough made way for, and readily changed into the fever. In the mean while, as the cough assisted the constitution in producing the fever, so the fever on this account attacked the lungs and *pleura*, just as it had affected the head even the week preceding this cough; which sudden alteration of the symptoms occasioned some, for want of sufficient attention, to esteem this fever an essential pleurisy or peripneumony,* though it remained the same as it had been during this constitution.

Chap. 5.

The fever remained the same, notwithstanding the sudden change of its symptoms.

2. For

* *To esteem this fever an essential pleurisy or peripneumony, &c.* Our author considers the affection of the lungs here only as a symptom of the fever described before, and this is arranged by Dr. Cullen, under his order, PROFLUVIA; and genus, CATARRHUS; which he defines,

“Often a contagious febrile affection; an increased excretion of the mucus from the glands of the membrane of the nose, fauces, or bronchia: at least efforts to produce such an excretion.”—Of which there are two species, one arising from *cold*; the other from *contagion*; all of which he considers as symptomatic; amongst the last enumerating this disease here spoken of by SYDENHAM: The

Sect. 5. 2. For it began now, as it always did, with a pain in the head, back, and some of the limbs; *which were the symptoms of every fever** of this constitution, except only that the febrile matter, when

Exemplified in the manner of its seizure, and the cure.

The proximate cause of both which is owing to an increased afflux of fluids to the mucous membrane of the nose, fauces, and bronchiæ, along with some degree of inflammation affecting these parts.— See *Synopsis Nosologicæ Methodicæ*, and *Præctice of Physic*, under the head *Catarrhus*.—*W.*

* *Which were the symptoms of every fever, &c.* This description is not sufficiently full to enable us clearly to distinguish this species of fever; and here it will be necessary to enumerate the symptoms which attend *catarrh from cold* first; and this generally begins with some difficulty of breathing through the nose; a dull pain and sense of weight in the forehead; some stiffness in the motion of the eyes; and a distillation from the nose, sometimes from the eyes, of a thin fluid, often found somewhat acid, both by its taste, and fretting the parts over which it passes; sometimes cold shiverings are felt, at least the body is more sensible than usual to the coldness of the air; and the pulse becomes, especially in the evenings, more frequent than common: soon after, these symptoms are accompanied with some hoarseness, and a sense of roughness, and soreness in the trachea; and with some difficulty of breathing, attended with a cough, which seems to arise from some irritation felt at the glottis: the cough is generally at first dry, occasioning pains about the chest, and more especially in the breast. Sometimes, together with these symptoms, pains resembling those of the rheumatism are felt in several parts of the body, particularly about the neck and head. While these symptoms take place, the appetite is impaired, some thirst arises, and a general lassitude all over the body. Some degree of the *cynanche tonsillaris* often accompanies the catarrh; when this disease has been occasioned by a violent cause; when it has been aggravated by mismanagement; and especially by fresh and repeated applications of cold, it often passes into a pneumonic inflammation, attended with the utmost danger.

With nearly the same symptoms the catarrh from contagion makes its appearance; though it comes on with more cold shiverings, and sooner shews febrile symptoms, and these likewise in a more considerable degree; it runs the more

when it was copiously deposited in the lungs and *pleura*, through the violence of the cough, Chap. 5. occasioned such symptoms as belong to those parts. But nevertheless, as far as I could observe, the fever was the very same with that which prevailed to the day when this cough first appeared; and this likewise the remedies to which it readily yielded plainly shewed. And though the pungent pain of the side, the difficulty of breathing, the colour of the blood that was taken away, and the rest of the symptoms that are usual in a pleurisy, seemed to intimate that it was an *essential pleurisy*; yet this disease required no other method of cure than that which agreed with the fever of this constitution, and did no ways admit of that which was proper in the *true pleurisy*, as will hereafter appear. Add to this, that when a pleurisy is the original disease, it usually arises betwixt spring and summer; whereas the distemper we now treat of, begun at a very different time, and is only to be reckoned a symptom of the fever which was peculiar to the current year, and the effect of the accidental cough.

3. Now in order to proceed in a proper manner to the particular method of cure, which experience shows to be requisite both in this cough and in those which happen in other

Particulars to be considered, preparatory to the method of cure.

more speedily through its course, which is commonly finished in a few days; sometimes it terminates by spontaneous sweat, and this in some persons produce miliar eruptions. It is, however, the febrile state of this disease that is finished in a few days; for the cough, and other catarrhal symptoms frequently continue longer; and often when they appear to be going off, they are renewed by any fresh application of cold.—Cullen's *Practice of Physic*.—W.

years,

Sect. 5. years, provided they proceed from the same causes, it is to be observed, that the *effluvia* which used to be expelled the mass of blood by insensible perspiration, are struck in, and thrown upon the lungs, from the sudden stoppage of the pores by cold, and, by irritating the lungs, immediately raise a cough. And the hot and excrementitious vapours of the blood being hereby prevented from passing off by perspiration, a fever is easily raised in the mass; namely, when either the vapours are so copious that the lungs are unable to expel them, or the inflammation is increased by the adventitious heat arising from the use of over-heating remedies, or too hot a regimen, so as suddenly to cause a fever in a person who was already too much disposed to one. But of whatever kind the *stationary fever* be, which prevails the same year, and at that time, this new fever soon assumes its name, becomes of the same kind, and in most particulars resembles it: though it may still retain some symptoms belonging to the cough, whence it arose. In every cough, therefore, proceeding from this cause, it is sufficiently manifest that regard must not only be had to the cough, but likewise to the fever that so readily succeeds it.

The method
of cure de-
livered.

4. Relying on this foundation *I endeavoured to relieve* such as required my assistance *by the following method*:* if the cough had not yet caused a fever,

* *I endeavoured to relieve by the following method, &c.* The indications of cure here are similar to those of the fevers of the continued inflammatory class, to abate the reaction of the system, determine the fluids to the surface of the skin, and subdue the cough: for which purposes, at first, if there be a necessity for lessening the bulk of the circulating

a fever, and other symptoms, which, as we Chap. 5.
 said usually accompany it, I judged it sufficient
 to forbid the use of flesh meats and all kinds of
 spirituous liquors, and advised moderate exer-
 cise, going into the air, and a draught of a cool-
 ing pectoral ptisan to be taken between whiles.
 These few things sufficed to relieve the cough,
 and prevent the fever, and other symptoms
 usually attending it. For as by abstaining from
 flesh and spirituous liquors, along with the use
 of cooling medicines, the blood was so cooled,
 as not easily to admit of a febrile impressi-
 on, so by the use of exercise those hot *effluvia* of the
 blood, which strike in, and occasion a cough,
 as often as the pores are stopt by sudden cold,
 are commodiously exhaled in the natural and
 true way, to the relief of the patient.

5. With respect to quieting the cough, it is
 to be observed that opiates, spirituous liquors,
 and heating medicines used for this purpose are
 equally unsafe; for the matter of the cough
 being intangled and stiffened thereby, those
 vapours which should pass off from the blood,
 in a gentle and gradual manner, by coughing,
 are retained in the mass, and raise a fever.

Opiates, spi-
 rituous li-
 quors, and
 heating me-
 dicines un-
 safe.

circulating fluids, we must begin with bleeding, propor-
 tioning the quantity of the blood to be taken away, and the
 repetition of the operation, to the strength of the constitu-
 tion and urgency of the symptoms, and pursuing the an-
 tiphlogistic method; vomiting will also be necessary for pro-
 moting perspiration, and relieving the lungs: these reme-
 dies should be first applied, if the abstemious regimen pre-
 scribed by our author should not be sufficient to answer
 every salutary purpose, which also should be persisted in
 during the use of medicines; and by giving small doses of
 antimonials very often every disagreeable symptom soon va-
 nishes. *W.*

And

Sect. 5. And this frequently proves very fatal to abundance of the common people, who, whilst they unadvisedly endeavour to check the cough, by taking burnt brandy and other hot liquors, occasion pleuritic or peripneumonic disorders; and by this irrational procedure, render this disease dangerous, and often mortal, which of its own nature is slight, and easily curable. Neither do they err less, though they seem to act more reasonably, who endeavour to remove the cause of the disease by raising sweat; for though we do not deny that spontaneous sweats frequently prove more effectual than all other helps in expelling the morbid cause, yet it is apparent that whilst we attempt to force sweat, we inflame the blood, and may possibly destroy the patient, whom we desire to cure.

The cough
sometimes
joined with
feverish
symptoms.

6. But it happens sometimes, not only when the disease has been unskilfully treated, in the manner above described, but also spontaneously, at the beginning of the illness, or in a day or two afterwards, especially in tender and weakly persons, that the cough is succeeded by alternate intervals of heat and cold, a pain in the head, back, and limbs, and sometimes a tendency to sweat, especially in the night; all which symptoms generally followed the fever of this constitution, and were frequently joined with a pain in the side, and sometimes with a constriction as it were of the lungs, which occasioned a difficulty of breathing, stopped the cough, and increased the fever.

The feverish
symptoms,
how best
relieved.

7. According to the best observation I could make, the fever, and its most dangerous symptoms, were best relieved by bleeding in the arm,

arm, *applying a blister to the neck,** and giving a glyster every day. In the mean time, I advised the patient to sit up some hours every day, to forbear flesh meats, and sometimes to drink small beer, sometimes milk and water, and sometimes a cooling and lenient ptisan. If the pain of the side abated not in two or three days, but continued very violent, I bled a second time, and advised the continuance of the glysters. But with respect to glysters, it must be carefully observed, either in this or other fevers, that they are not to be long and frequently used when the disease is in its decline; especially in hysteric women, and in men that are subject to the hypochondriac disease; for the blood and juices of such persons are easily changed, and soon agitated and heated, whence the animal œconomy is disturbed, and the febrile symptoms continued beyond the usual time.

Chap. 5.
A caution concerning glysters.

8. But to return to our subject: whilst by this means we allowed time that the blood might gradually free itself from those hot par-

Rough methods, and abundance of remedies, very pernicious.

* *Applying a blister to the neck, &c.* This will be rarely necessary, unless there appears to be oppressive symptoms of inflammation affecting the lungs, and then the application of the blister will be better upon the chest, as the seat of pain may point out: and in order to appease the cough we must endeavour to allay the irritation by sheathing the acrimony of the mucus occasioning it with mucilaginous and oily demulcents mixt with nitre; and inhalation of the vapour of warm water impregnated with vinegar may be a beneficial assistant.

Notwithstanding all which, should the cough continue, and there should be evident signs of the inflammatory symptoms having abated, opiates may be safely administered; though not before, because they might increase the difficulty of breathing and other inflammatory symptoms. *W.*

Sect. 5. ticles that were lodged in the *pleura* and lungs, all the symptoms usually went off in a gentle manner; whereas when the disease was treated in a rough way, by giving abundance of remedies, it either destroyed the patient, or rendered it necessary to repeat bleeding oftener than the disease required, or would safely bear, in order to save his life: for though repeated bleeding answers every purpose in the true pleurisy, and is alone sufficient for the cure thereof, provided there be no hindrance from a hot regimen and heating medicines, yet here, on the contrary, it sufficed to bleed once, or at most twice, in case the patient refrained from bed, and drank cooling liquors. And I never found it necessary to bleed more frequently, unless the symptoms relating to the *pleura* and lungs were much increased by some adventitious heat, and even in this case the practice was not wholly void of danger.

A malignant pleurisy sometimes happens.

9. Upon this occasion I shall briefly deliver my sentiments with respect to a very trite and common opinion, *viz.* that a pleurisy is found to be of so malignant a nature in some years, *that it will not then bear bleeding*,* at least not so often as this distemper ordinarily demands.

Now

* *That it will not then bear bleeding, &c.* This is certainly true; and we should endeavour to ascertain when it may be performed with safety, and when it ought to be omitted. Dr. Swan directs us to attend to the reigning epidemic of the year; and let that be our direction also with respect to its repetition, and the quantity of the blood to be taken away. Though some use may be derived from such an observation, yet still I should depend on the nature of the constitution of my patient, and omit or repeat the operation as particular appearances might point out: if the patient is of a strong plethoric habit, with a full,

Now though I conceive that a true and *essential* Chap. 5.
pleurisy, which, as shall hereafter be observed, Chap. 5.
happens indifferently in all constitutions, does
in all years equally indicate repeated bleeding;
yet it sometimes happens that the peculiar epi-
demic fever of the year, from some sudden alte-
ration of the manifest qualities of the air, rea-
dily throws off the morbid matter upon the
pleura and lungs, whilst the fever notwithstand-
ing continues exactly the same. Wherefore in
this case, though bleeding may be used to abate
this symptom when it is very violent, yet gene-
rally speaking, little more blood ought to be
taken away than is required by the fever whereon
this symptom depends; for if the fever be of a
kind that will bear frequent bleeding, it may
likewise be repeated in the pleurisy, which is a
symptom thereof; but if the fever will not bear
repeated bleeding, it will prove prejudicial in
the pleurisy, which will go off with, or last as
long as the fever does. And in my judgement
this was the case in the *symptomatic pleurisy* that
accompanied the fever which prevailed here at
the same time the cough began, namely, in win-
ter, in 1675; and therefore I must observe that
whoever, in the cure of fevers, hath not always
in view the constitution of the year, inasmuch
as it tends to produce some particular epidemic

Repeated
and copious
bleeding bad
herein.

full, tense, hard, frequent pulse, bleeding can never be
wrong; if the blood should be fizy, it is often right, but
not always, for though there should be a coriaceous appear-
ance on the surface, should the crassamentum or cruor be-
low be of a loose texture, which I have repeatedly seen,
bleeding should not be persisted in, as it so rapidly tends
to weaken the crasis of the blood, and dispose it to run
into a putrescent acrimony, it perceptibly increases the
mischiefs we should labour to conquer. W.

Z 2

disease,

Sect. 5. disease, and likewise to reduce all the contemporary diseases to its form and likeness, proceeds in an uncertain and fallacious way.

A pain in the side removed, &c. without repeated bleeding.

10. In the month of *November*, of the above-mentioned year, I attended the eldest son of Sir *Francis Windham* in this fever. He complained of a pain in his side, and the other symptoms that attended those who had this disease. I bled him but once, applied a blister to his neck, injected glysters every day, gave him cooling ptisans and emulsions, and sometimes milk and water, or small beer to drink, and advised his sitting up a few hours every day; and by this method he recovered in a few days, and a purge completed the cure.

The cough without a fever how to be treated.

11. But it must be remarked, that though these were the common symptoms which succeeded the cough, during this winter, yet the cough, unattended with these symptoms, was more prevalent at the same time. But this required neither bleeding nor glysters, provided a fever was not occasioned by a hot regimen, or heating medicines; it sufficed to allow the benefit of the open air, and to forbid the use of flesh, wine, and such spirituous liquors, which are apt to cause a fever. I likewise ordered *the following troches to be taken often*,* which indeed are the best I know for stopping coughs occasioned by taking cold.

* *The following troches to be taken often, &c.* In habitual coughs, unattended with a fever, where the matter requires to be thinned in order to facilitate its expectoration, these troches of our author will be serviceable; but where the matter is thin, acrimonious and irritating, the *trochisci glycyrrhizæ*, or *e nitro* of the new London Pharmacopœia, are infinitely better calculated to stop the cough. *W.*

Take

Take of sugar candy, two pounds and a half; boil Chap. 5.
 it in a sufficient quantity of common water till it }
 sticks to the fingers ends: then add of powder of Pectoral
 liquorice, elecampane, and seeds of annise and an- troches.
 gelica, each half an ounce; powder of Floren-
 tine orrice-root, and flour of brimstone, each two
 drams; oil of anniseed, two scruples; make the
 whole into troches with the requisite art; which
 the patient should always carry in his pocket,
 taking one of them frequently.

12. Before I conclude this essay on epidemic diseases, I must answer an objection that I foresee will be made to part of it, *viz.* that it does not seem sufficient to oppose the *malignity* that accompanies many of these diseases. It is not my design, nor am I able, to confute the received opinion of the learned, whether ancients or moderns, in relating to *malignity*, since there are plain proofs of it in most epidemics.* I only beg leave to give my sentiments of the nature of this *malignity*, to prove the reasonableness of my practice. For I may say, with the very learned *Scaliger*, “ I do not contend for my own opinion, but for reason, or what carries the appearance of it, without regarding what some censorious persons assert.”

* Since there are plain proofs of it in most epidemics, &c. This is discoverable from the nature of the attack, and attendant symptoms, which so immediately succeed; for they begin very suddenly with a slight coldness and shivering, a great loss of strength immediately ensues, and the pulse at the same time is small, quick, and contracted; an erect posture easily occasions fainting, the patient is perpetually drowsy, but cannot sleep, and if he does, a greater decay of strength succeeds thereupon, with a *delirium*; he complains of no great pain, thirst, or other troublesome symptom, and yet is uneasy, and at length the extremities grow cold, the pulse begins to intermit, and can no longer be perceived in the wrist, and death is at hand.

Sect. 5.
 Malignity
 explained.

13. I conceive then that the malignity in epidemics, whatever its specific nature be, consists and centers in very hot and spirituous particles, that are more or less opposite to the nature of the circulating fluids, because such particles only are capable of producing so sudden an alteration of them, as is frequently observed in malignant diseases. And I judge that these hot and spirituous particles act chiefly by way of assimilation; because by the law of nature every active principle endeavours to produce its like, and to reduce and mould whatever opposes it to its own nature. Thus fire generates fire, and a person seized with a malignant disease infects another by an emission of spirits, which soon assimilate the juices to themselves, and change them into their own nature.

In what
 kind thereof
 sweating is
 proper.

14. From these considerations it follows, that it is best to expel these particles by sweat, since by this means the disease would be immediately eradicated. But experience contradicts this, and shews it cannot be done in every kind of malignity. For though in the *plague*, the pestilential particles, both by reason of their exceeding subtilty, and their residing in the most spirituous parts of the blood, are dissipable, and may be expelled by a continued sweat; yet in other fevers, where the assimilating particles are less subtile, and mixed with grosser humours, the malignant fuel cannot only not be expelled by sweat, *but is frequently increased by the diaphoretics given to promote it.** For the more active those

* *But is frequently increased by the diaphoretics, &c:* This was the case undoubtedly in our author's time, when this class consisted of strongly-heating medicines, by which the circu-

those hot and spirituous particles are rendered Chap. 5.
 by heating medicines, the more is their power
 of assimilating increased; and the more likewise
 those juices are heated whereon they act, so much
 the more readily are they assimilated, and yield
 to the impressions thereof. Whereas contrariwise,
 it is reasonable to think that medicines of an
 opposite nature do not only restrain the action of
 the hot and acrid particles, but likewise thicken
 and strengthen the juices, so as to enable them
 to undergo, or even to conquer the force of the
 morbidic spirits. And here I may appeal to ex-
 perience, which hath taught me that the purple
 spots in fevers, and the black eruptions in the
 small pox, increase more readily in proportion
 as the patient is heated; and that according to
 the coolness of the regimen employed, which is
 very suitable to them, they are used to decrease
 and be diminished.

15. Now were it to be inquired whence it happens, since malignity consists in such hot and spirituous particles, that so few signs of a fever are frequently found in the most malignant diseases; it might be answered, first, that in the

Why ma-
 lignant dis-
 eases have
 often few fe-
 brile symp-
 toms.

circulatory powers were greatly increased, and the fluids pushed about too rapidly; by which means every febrile symptom was aggravated, and a train of fresh ones, which did not belong to the complaint, brought on; but certainly in all fevers, a moderate diaphoresis induced, and kept up through the whole course of the disease by gentle means, such as render the cuticular pores constantly permeable, by preventing spasmodic constriction of the small capillary vessels, without increasing the power of re-action of the vascular system by stimuli, is extremely necessary, and highly beneficial, by hindering the internal parts of the system from being loaded with congestions, and avoiding those troublesome symptoms which occur from this cause alone. *W.*

Sect. 5. *plague*, the most remarkable instance of malignity, the morbid particles are so very subtle, especially in the beginning, that though they pass through the blood with the utmost velocity, and (*the spirits being, as it were, fixed or congealed**) raise no ebullition therein, whence the patient dies without a fever.

16. But in other epidemics, accompanied with a less degree of malignity, the febrile symptoms are sometimes so slight, from the disturbance raised in the blood by the morbid particles contained in the mass, that nature being in a manner oppressed, is rendered unable to produce the more regular symptoms that are suitable to the disease, and almost all the phenomena that happen are irregular, by reason of the entire subversion of the animal œconomy; in which case the fever is often depressed, which of its own nature would be very high. Sometimes also fewer signs of a fever appear than the nature of the disease requires, from the translation of the malignant cause, either to the nervous system, to some other parts of the body, or to some of the juices not contained in the blood, whilst the morbid matter is yet turgid.

Malignity,
how most
conveniently
conquered.

17. But which way soever it be, I cannot even so much as conjecture what other method of cure ought to be used to conquer the malignity, besides that which is suitable to the epi-

* *The spirits being, as it were, congealed and fixed, &c.* The suddenness of the dissolution, here, seems rather to arise from the strongly sedative power of the morbid miasmata, which instantaneously destroys the motion of the living solids, and thus renders the constitution incapable of experiencing the stimulus of the vital principle, by which alone life is maintained. *W.*

demic

demic wherewith it is joined. So that whether the epidemic be of the number of those wherein the febrile matter must first be concocted, and soon after properly expelled by sweat; or of those that are terminated by some eruption; or of those that require the assistance of art to make way for them: in all these kinds, the malignity, which is the concomitant of the disease, will rise, and sink, continue, and go off with the original disease; and consequently whatever evacuation agrees in general with the fever, agrees likewise with the malignity, how much soever these evacuations may be of a contrary nature to each other. Hence the malignity that accompanies autumnal intermittents, and also the continued fever, which is of the same nature, will yield to a sweat, which follows concoction as its effects. And the seasonable suppuration of the pustules in the small pox will carry off the malignity attending that disease, and so of the rest: in all which the peculiar species of malignity is best overcome by those methods which prove most successful in the cure of those diseases whereto it belongs, whether by this or any other procedure. This appears evident to me from reason, and is likewise universally confirmed by experience.

C H A P. VI.

The Recapitulation.

1. **A**ND thus we have, at length, shewn, that the space of years which furnished us with the preceding observations, produced five different

Five kinds of constitutions described in the foregoing sheets.

Sect. 5. different kinds of constitutions, that is, five peculiar dispositions of the air, productive of as many peculiar epidemic fevers. But the first of these fevers, which prevailed in those years wherein autumnal intermittents chiefly raged, seems to be the only one, as far as I have hitherto observed, in which nature regulated all the symptoms in such manner as to fit the febrile matter, prepared by proper concoction for expulsion, in a certain time, either by a copious sweat, or copious perspiration; and upon this account I call it the *depuratory fever*.* And in reality I am inclined to believe, that this is the capital and *primary* fever of nature, as well with respect to the regular method which nature uses in promoting and accomplishing the digestion of the morbid matter in a limited time, as also because it occurs more frequently than other fevers.

Intermittents, the most frequent disorders.

2. For it is probable that intermittent fevers oftener prevail epidemically than all other diseases, if those authors may be credited who have wrote so largely of their frequency in former ages, whatever may be the reason of their appearing so seldom since the plague depopulated this city; for the pestilential fever was the forerunner of all the inflammatory fevers that afterwards succeeded. But I am mistaken if the necessary and excellent aphorisms, left us by *Hippocrates*, and other ancient physicians, are not adapted to the *primary* fever above mentioned, by means of which it is to be so regulated,

* I call it the *depuratory fever*, &c. This is arranged by CULIEN from SAUVAGES, amongst the varieties of *synochus*, being neither purely inflammatory nor nervous, but in different stages belonging to each. W.

that

that the febrile matter may be prepared for a Chap. 6.
 proper *crisis* by sweats : nor do I perceive how
 these aphorisms can be adapted to the succeeding
 kinds of fevers, which being of a very different
 nature are rarely cured by such a method, as
 enables us to cure those diseases, provided we
 embrace and pursue it to the end. But however
 this be, it is worth observing, that this fever,
 which depended on that constitution wherein
 intermittents prevailed over the rest (if it
 proved of long continuance, or if the patient
 was weakened by large evacuations) sometimes
 changed to an intermittent; whereas the fevers
 that prevailed in the following years, though
 they continued very long, scarce ever became
 intermittent; which was a pretty clear proof,
 that the continued fever and those intermittents
 differed little in their nature from each other.

3. Now if I should be asked in what manner
 the species of a continued fever may be gathered
 from the signs set down by me in the description
 of fevers, since every particular fever is mostly
 attended with those symptoms which all fevers
 have in common, as heat, thirst, restlessness,
 and the like; I answer, it is indeed difficult,
 but not impossible, in case all the circumstances
 enumerated in the preceding history be thoroughly
 attended to, especially to a physician residing
 in a city, or other populous place. For let us
 suppose that he is called to attend a person in
 a continued fever; he has this in the first place
 to assist him to form a right judgement of the
 species, *viz.* (1.) he may easily learn, either
 from his own observation, or the relation of
 others, what other diseases besides this fever
 rage epidemically in those places,
 and

The species
 of a fever,
 how discovered.

Sect. 5. and of what kind they are; which being known, he will be no longer in doubt of what kind that fever is, which accompanies the other then reigning epidemic. For though the fever may possibly appear with such symptoms only as are common to all fevers, especially if it be disturbed by a method of cure directly contrary to it, yet other epidemics will clearly discover the signs that are peculiar to its nature and genius.

4. Thus, for instance, whoever sees the small pox, and is well acquainted with the history of it, will easily conjecture, either by the day on which the eruptions came out, or by their size, colour, and the like, to what kind of *small pox* this particular sort is to be referred; and when he has once discovered that sort of small pox which prevails chiefly in that year, and in those places, he will be no stranger to the species of any fever that then and there prevails. And undoubtedly if I were perfectly acquainted with the history of diseases, which I do not pretend to, as I should not scruple, upon seeing any epidemic, to declare of what kind the reigning fever of that time was, though I had never seen it; so likewise having seen any fever, it would sufficiently teach me what epidemic accompanied it, *viz.* if the measles, small pox, or dysentery, &c. For some particular species of these diseases, as well as a peculiar fever, constantly attends every particular constitution.

5. (2.) Besides the signs, which an attention to the contemporary epidemics affords, *the symptoms of every fever let in some light for discovering* *
the

* *The symptoms of every fever let in some light, &c.* The world is much indebted to the labours of the nosologists, who

the species thereof. For though, as we intimated above, all fevers have some symptoms in general, yet there are certain distinguishing signs Chap. 6.

who have endeavoured to form particular plans, for the distinguishing different diseases, by collecting the pathognomic symptoms of each, and arranging them under different heads: for by this method if a practitioner can only retain a few of those which are the constant concomitants of any disease, he will be led soon to discover its specific nature; an example of which we shall present our readers with from Dr. Cullen, who we look upon to be the most accurate of the nosologists, and who has favoured the world with the most concise and clear work on this subject:

In diseases there are four divisions; CLASS, ORDER, GENUS, SPECIES; we shall, as we are on the subject of fevers, confine ourselves to their arrangement.

The CLASS, belonging to which is called,
PYREXIÆ ——— FEBRILE AFFECTIONS.

The characteristic marks of which are,

After a chilliness, the pulse becomes frequent; the heat of the body greater than natural; many of its functions imperfect, with a diminution of the strength, particularly of the limbs.

The ORDER.

FEBRES ——— FEVERS.

Which are distinguished by

Languor, lassitude, and other signs of debility having preceded, febrile affections come on without any primary local disease. This order is divided into two sections:

INTERMITTENTS, and CONTINUED FEVERS.

Sect. I. INTERMITTENTS.

These are fevers, arising from marsh miasmata, consisting of many paroxysms, an intermission, or at least a remission of febrile affection interposed, returning with a remarkable exacerbation, and for the most part with chillness or shivering, having only one paroxysm every day.

Now of intermittents there are different kinds, these are called GENERA; and are divided according to the periods of their fits returning, which we have before specified into, G. 1. TERTIANS; G. 2. QUARTANS; and G. 3. QUOTIDIANS; amongst which are enumerated the REMITTENTS of other authors.

Sect.

Sect. 5. signs which nature has particularly affixed to every species; but as these are more latent and obscure, they are usually discovered only by very

Sect. II. CONTINUED FEVERS.

These neither have intermissions, nor arise from marsh miasma, but are accompanied with remissions and exacerbations, though not very remarkable, having two paroxysms every day.

Of these, too, there are different kinds, or GENERA.

Gen. 4. *SYNOCHA*; or Inflammatory Fever.

This is known by, The heat being much increased; the pulse frequent, strong, and hard; the urine high coloured; the functions of the sensorium a little disturbed.

Gen. 5. *TYPHUS*; or Nervous Fever.

This is a contagious disease; a little increase of heat; the pulse small, weak, and most commonly frequent; the urine not much altered; the functions of the sensorium greatly disturbed; and the strength much diminished.

Gen. 6. *SYNOCHUS*; or Mixed Fever.

A contagious disease also; a fever composed of the preceding *SYNOCHA* and *TYPHUS*; in the beginning, the former existing; in the progress, and towards the end, the latter.

Now all these genera have different species belonging to them, which form the last division; which species have their varieties.

In order, therefore, to discover the particular nature of any fever, we must advert to the symptoms, and as we find those of one or the other genus prevalent, we may on that head be certain to which it most properly belongs, and by comparing it more diffusively, inform ourselves of what species it is, or what variety; by consulting those enumerated under the general term, or distinguish whether it deviates so far from the whole set down in the catalogue, as to merit a distinct consideration.

This mode of acquiring information is one of the greatest improvements of the medical art, to which our author has in some degree a just claim, as supplying the hint; and is the result of that diligent and accurate observation he often so forcibly, through the course of his works, endeavours to inculcate, and by which mankind are, and will continue to be so greatly benefited.

There

very diligent and accurate observers. Amongst these distinguishing signs, I have always reckoned that *sweating* or *dryness*, at a particular time of the disease, chiefly shewed the species of the fever, in case the fever had not been forced from its own natural state by an improper method. And this manifestly appeared to me in all the epidemic fevers, which have been treated of in these observations.

Chap. 6.

Sweating
or dryness,
principal
distinguishing
signs.

6. To give some instances of this: in those fevers which prevailed upon the decline of autumnal intermittents, the external parts were dry, nor was there the least sign of sweat before the concoction of the febrile matter, which was generally completed on the *fourteenth* day: and in this case it was very dangerous to raise a sweat; a *delirium*, and other fatal symptoms being immediately occasioned thereby. In the pestilential fever, which followed this, and preceded all the subsequent inflammatory fevers, no spontaneous sweat appeared, but a sweat might be raised in the beginning, by exhibiting sudorifics, and as soon as it flowed all the symptoms went off. In the next succeeding fever, which accompanied the small pox in those years where-

Exemplified.

There is another genus of fevers mentioned by almost all nosologists, under the term, FEBRIS HECTICA, which Dr. Cullen defines,

A fever returning every day; with meridian and evening accessions; a remission, very rarely an intermission, in the morning; attended most commonly with night sweats, and urine depositing a branny, lateritious sediment. But this he does not admit as one of his genera, because he always observed it to be symptomatic: and indeed almost all which are arranged as species under this genus by SAUVAGES are certainly of that kind, evidently arising from some other disease inherent in the habit. *W.*

Sect. 5. in it proved regular, the patient was subject to profuse spontaneous sweats in the beginning of the illness, but by encouraging them, all the symptoms were increased. In the two fevers that accompanied the two irregular kinds of the small pox, and the dysentery, the sweat was likewise irregular, and generally appeared only in the beginning of the disease, though the sweat which accompanied the former fever, was somewhat more copious than that which accompanied the latter; but neither afforded any relief, because the sweat proceeded not from previous concoction, but from the confused motion of the noxious particles.

7. But it seems exceeding difficult to me to discover the species of a new fever in the first year of a constitution, when no body has seen an example of it, or can imagine what epidemic diseases may hereafter arise, which are generally preceded by this fever. It would be tedious to enumerate all the particulars that occurred in those years of which I have treated, whereby it might appear that many manifest signs were suggested by nature, to enable us to make such discovery; and consequently this knowledge necessarily depends upon a careful and accurate observation of all circumstances.

8. But though it be difficult, if not impossible, to ascertain the species of a new fever at its first coming, yet with respect to the cure, the indication to be taken from such things as do good or mischief, at least remains to assist us therein; by means of which we may by degrees find out a way to secure the patient, provided we do not hurry on too fast, which indeed I esteem to be most particularly pernicious, and to have destroyed

destroyed more persons in fevers than any other thing whatsoever. Nor do I think it below me to acknowledge, with respect to the cure of fevers, that when no manifest indication pointed out to me what was to be done, I have consulted the safety of my patient, and my own reputation, most effectually, by doing nothing at all; for whilst I carefully attended to the disease, in order to cure it in the best and safest manner, the fever either went off gradually of itself, or came to such a state as shewed what medicines were to be used to remove it. But it is much to be lamented that abundance of sick persons are so ignorant, as not to know that it is sometimes as much the part of a skilful physician to do nothing at all, as, at others, to exhibit the most effectual remedies; whence they not only deprive themselves of the advantages of a fair and honourable procedure, but impute it either to negligence or ignorance; whereas *the most illiterate empiric knows how to heap medicine on medicine as well as the most prudent physician,** and usually does it in a much greater degree.

9. And

* *The most illiterate empiric knows how to heap, &c.* I cannot perfectly coincide in this opinion of our author; for if a prudent physician will condescend to be guilty of such mal-practice, he can do it manu tutâ; but the ignorant empiric, unconscious of that sympathy that exists between the stomach and machine in general; not knowing the powers of medicine, nor the effect which may be produced by their quantity or quality; having no idea of the operations of nature; totally blind to the action of the animal œconomy; and fancying something always must be done, though to what purpose he is a stranger; seldom contents himself with non-significants: *mercury, bark, opium, and antimony,* he deals forth with a lavish hand, converting these noble remedies,

Sect. 6.

9. And now I have communicated the observations I have hitherto made (at least such as could be brought into some method) with respect to the species of *epidemic diseases*, and the order wherein they succeeded from 1661 to the end of 1675; when the small pox and the continued fevers which accompanied it, and had prevailed for near two years, became more gentle, and seemed to be going off. As to the diseases that may hereafter succeed, they are only known to that omniscient Being from whom nothing is hid.

SECTION VI. CHAP. I.

Of intercurrent Fevers.

Stationary fevers prevail according to their order.

1. **T**HE observations of the preceding years, above delivered, sufficiently shew that some fevers are deservedly entitled *stationary fevers*; I mean such as arise from some peculiar constitution of a particular year not yet sufficiently known. Every one of these prevails in its order, and rages with great violence, having, as it were, the ascendant over all the rest during that continued course of years. Whether there are any other species besides those just mentioned, or whether they succeed each other in a certain term of years in a constant and invariable order, or whether it be otherwise, I have

from his ignorance, into deleterious poisons, and launches those unfortunate patients, who fall under his care, with an unblushing cheek into eternity, *W.*

not

not yet been able to discover. But there are also other continued fevers, which, though they sometimes rage less, and at other times more severely, yet because they are mixed with all kinds of *stationary* fevers, and likewise with each other indifferently in the same year, I conceive they should be called *intercurrents*. I shall in the following sheets communicate all that I have learnt from observation concerning the nature of these fevers, and the method of curing them: they are, the *scarlet fever*, *pleurisy*, *bastard peripneumony*, *rheumatism*, *erysipelatous fever*, *the quinsy*, and, perhaps, some others.

Chap. 1.
Intercurrents
 mixt with
 these and
 each other
 indifferently.

Intercurrents
 enumerated.

2. But as all these diseases are, during their state, or at least were, accompanied with a fever, till it went off, the febrile matter being thrown upon some particular part, according to the nature of the distemper, I question not that the fever is to be accounted the primary disease, and that the other disorder, whence those diseases generally derive their name, are symptoms, which chiefly regard either the peculiar manner of the *crisis*, or the part principally affected. But provided the thing be agreed upon, *I will not contend about names; though* * I take the

The fever
 the original
 disease in all.

* *I will not contend about names; though I take, &c.* The confusion and disagreement amongst physicians relative to this matter, occasioning such an unnecessary number of multiplications, divisions, and subdivisions of diseases, and names, was formerly complained of with great justice; but these inconveniences are now pretty well removed: for, almost all diseases, be they of what species they may, are reducible to some class, order, and genus, and are discoverable from being attended by the pathognomic symptoms which distinguish the class, order, and genus to which they belong: hence all fevers appertain to some of the six genera we have before enumerated; and though they take their

Se&t. 6. the liberty to call a disease by the particular name which pleases me best.

Intercurrents
are some-
times epi-
demic.

3. It must be observed, that as the *stationary fevers*, of which we have treated above, prevailed more or less epidemically, as we said, according as they were favoured by the constitution of years, resulting from a secret and inexplicable temperature of the air; so likewise did these *intercurrents* sometimes, but less frequently. For though they generally arise from some peculiar disorder of particular bodies, whereby the blood and juices are some way vitiated, yet sometimes they proceed *mediately* from some general cause in the air, which, by its manifest qualities, so disposes the human body, as to occasion certain disorders of the blood and juices, which prove the immediate causes of such *epidemic intercurrents*. As for instance, when a sharp frost, which has lasted a long time, and continues late in the spring, is suddenly succeeded with warmer weather, *pleurisies*, *quinsies*, and the like diseases usually arise, whatever be the general constitution of the year. And because these diseases, which happen indif-

their names very often from the most perceptible or oppressive symptom, which by no means points out their specific nature, yet this we can discover by reducing them to their peculiar genus: thus, for instance, the small pox is a contagious fever, taking its name from the eruption; now this fever may either be the *synocha*, or *typhus*, which requires different modes of management, it is therefore necessary for us to know which is the existent fever, before the eruption can give us any proof in this particular; but by enumerating the symptoms we can discover its nature precisely, and thus be directed in taking the measures the most salutary for our patients, and preventing great mischief which would otherwise accrue from an error in this point.

W.

ferently

ferently in all years, do sometimes rage as epidemically as those which continue only for a certain course of years, we chuse to call them *intercurrents*, in order to distinguish them from the latter.

4. But notwithstanding the considerable difference there is between these two kinds of fevers, with respect to the causes proceeding from the air, yet they frequently agree in other external and *procatarctic* causes. For not to mention *infection*, which sometimes communicates stationary fevers, and *surfeits*, which give rise to both stationary and intercurrent fevers, the manifest external cause of the greater part of fevers is to be sought for hence; either (1.) a person hath left off his clothes too soon, or (2.) imprudently exposed his body to the cold after being heated with violent exercise; whence the pores being suddenly closed, and the perspirable matter retained in the body, that would otherwise have passed through them, such a particular kind of fever is raised in the blood, as the then reigning general constitution, or the particular depravity of the juices, is most inclined to produce. And indeed I am of opinion, that abundance more have been destroyed by this means than by the *plague*, *sword*, and *famine* together; for if a physician examines his patient strictly concerning the first occasion of the disease, he will generally find it to proceed from one of these causes, provided it be of the number of those acute diseases we have treated of above. Upon this account I always advise my friends never to leave off any wearing apparel till a month before Midsummer; and not

Sect. 6. to expose themselves to the cold after being heated by exercise.

Most intercurrents are essential diseases.

When not so, how they are to be treated.

5. But it must here be carefully remarked, that though the diseases I am now to treat under the title of *Intercurrents*, were most, if not all of them, *essential* diseases; yet frequently certain disorders happen in *stationary* fevers, resembling these *intercurrents* as to the phenomena, and likewise characterized by the same name, which however are manifest symptoms of those fevers. Now in this case they are not to be treated by the method which is to be used when they are essential diseases, but rather by that which the fever requires, whereof they are now symptoms, which method is only to be slightly adapted to their particular cure; but, in general, great attention is to be had to the fever of the year, and to find out the easiest method of conquering it, whether by bleeding, sweating, or any other procedure: for if this be disregarded, we shall frequently mistake, to the great detriment of the patient. Should it be objected, that the disorders under consideration, which I term *essential*, are in reality only symptoms, I reply, that perhaps they may be symptoms with respect to the fever whereto they properly belong, but they are at least symptoms of fevers which always necessarily produce them. To exemplify this matter: in an *essential pleurisy* the fever is of such a nature, as always to deposite the morbid matter upon the *pleura*; in an *essential quinsy*, of such a nature as always to throw off the morbid matter upon the throat; and thus it happens in the rest: whereas, when any one of the above-mentioned diseases succeeds

ceeds a fever that belongs to a particular constitution of years, and is dependent thereupon, it is then produced *accidentally* only, and no way necessarily: for which reason there is a remarkable difference between them. Chap. 1.

6. But, in order to *distinguish rightly between essential and mere symptomatic disorders*,* it is of moment to consider that the same symptoms which accompany any particular *stationary fever* at the beginning, will likewise happen at the same time in a *pleurisy*, or *quinsy*, when these are only accidental symptoms of such a fever. We had a proof of this in the above-mentioned *symptomatic pleurisy*, that succeeded the fever which prevailed in this winter of 1675. For all that were seized with the *pleurisy* were afflicted in the beginning with a pain in the head, back, and limbs, which were the most certain and common symptoms of all those fevers that preceded the *pleurisy*, and continued after that

* To distinguish rightly between essential and symptomatic disorders, &c. This distinction is highly necessary to be observed; for sometimes those very affections which are in one case only concomitants of a disease, in another constitutes the disease itself; some fevers themselves are often only symptoms: Dr. SWAN says, Essential diseases are those which are always attended with such a distinguishing train of symptoms, as manifestly appear more or less in every person that is seized with them, and depend upon the genuine and invariable nature of the disease. But in symptomatic diseases, the concomitant symptoms are accidental, and common to other distempers, and not always necessarily present, and differ according to the different constitution, age, sex, and manner of living of the persons affected. But diseases now are divided into *idiopathic*, and so all such are considered which are primary, and do not depend on any other; and *symptomatic*, where they are only secondary, and are caused by some other complaint inherent in the system. W.

Sect. 6. disease went off. Whereas when either of these *intercurrents* is the *essential* disease, it attacks in the same manner in all years indifferently, having nothing at all in common with the then prevailing *stationary fever*. Besides, all the symptoms that afterwards arise are more apparent, as not being concealed and perplexed by a mixture of other phenomena of a different nature, and belonging to another fever. Again, the time of the year, wherein the greater part of *essential intercurrents* usually make their appearance, frequently points out the kind of disorders whereto they should be referred. But, lastly, he is best qualified to discover the diagnostic signs, both of these, and all other diseases, who, by daily and diligent observation, hath searched so intimately into their nature and symptoms, as at first sight to be able to distinguish the *genus*; though perhaps the characteristic differences of some of them may be so very subtle, that he cannot express them by words to another.

These different species of fevers, how to be treated.

7. But as these different species of fevers, so far as I can learn by carefully considering their concomitants, and the method of cure, proceed from an inflammation of the blood, peculiar to every disease, I place the principal parts of the cure in cooling the blood. In the mean time I always endeavour to expel the morbid matter, by a method of cure, varied according to the nature of the disease, and which experience shows to be readily curative of the particular species thereof. In reality, whoever certainly knows how to expel the febrile matter, either by bleeding, sweating, purging, or any other more

more proper way, must have the best success in Chap. 2.
the cure of all fevers.

C H A P. II.

Of the Scarlet Fever.

I. **T**HOUGH the scarlet fever may happen * at ^{Rise and symptoms of the scarlet fever.} any time, yet it generally comes at the close of summer, when it seizes whole families, but especially children. (I.) A chilness and shivering come at the beginning, as in other

* *Though the scarlet fever may happen, &c.* Notwithstanding many dispute the existence of this fever, as described here by our author, yet SAUVAGES has inserted it from him as a species of the scarlatina; and Dr. CULLEN, relying on the faith of SYDENHAM and others, has also classed it under his order of Exanthemata or eruptive fevers; though he declares, during the course of forty years practice, he has not seen a scarlet fever epidemic in Scotland; he has observed in every case the disease to be of that species which SAUVAGES calls the *scarlatina anginosa*, his sixth species. I can from experience speak, that I have several times seen this fever, though always in children, without any anginose symptoms, answering very exactly to the description given by SYDENHAM; though sometimes coming on with symptoms more rapid and violent than he has described, yet constantly yielding to a vomit, and the use of the saline mixture perfectly neutralized, in which was dissolved a small portion of emetic tartar.

Dr. CULLEN in his Synopsis defines it, a contagious synocha, the face swelling a little on the fourth day of the disease, attended at the same time with a florid redness throughout the skin, with broad spots, at last running together, and in three days after converted into branny scales; an anasarca often supervening: and this he divides into two species;

1. *Scarlatina simplex*, without any anginose affections.
2. *Scarlatina cynanchica*, with ulcerations in the throat.

W.
fevers,

Sect. 6. fevers, but without great sickness; (2.) afterwards the whole skin is covered with small red spots; which are more numerous, larger, and redder, but not so uniform as those which constitute the measles; (3.) they continue two or three days, and after they are vanished, and the skin is scaled off, there remains a kind of branny scales, dispersed over the body, which fall off and come again for twice or thrice successively.

The method
of curing it.

2. As this disease seems to me to be nothing more than a moderate effervescence of the blood, occasioned by the heat of the preceding summer, or some other way, I do nothing that may prevent the despumation of the blood, and the expulsion of the peccant matter through the pores, which is quickly enough performed. Accordingly, I refrain from bleeding, and the use of glysters, which make a revulsion, whereby I conceive the noxious particles are more intimately mixed with the blood, and the motion, which is more agreeable to nature, is checked. On the other hand I forbear cardiacs, by the heat of which the blood may perhaps be put into a more violent motion, than so gentle and mild a separation as effects the cure require; and besides by this means a high fever may be occasioned. I judge it sufficient for the patient to refrain wholly from flesh, and all kinds of spirituous liquors, and to keep his room, without lying always in bed. When the skin is entirely peeled off, and the symptoms vanished, it is proper to give a gentle purge, suited to the age and strength of the patient. By this plain and manifestly natural method, this disease in *name* only, for it is little more, is easily cured without

out trouble or danger; whereas on the contrary, if we add to the patient's evils, either by confining him continually in bed, or exhibiting abundance of cardiacs, and other superfluous remedies, the disease is immediately increased, and he frequently falls a victim to the officiousness of the physician. Chap. 3.

3. But it should here be observed, that when epileptic *convulsions*, or a *COMA*, arise in this disease at the beginning of the eruptions, which sometimes happened to children and young persons, it is highly proper to apply a large and strong blister to the neck, and immediately exhibit a paretic of *syrup of white poppies*, which is to be repeated every evening during the illness; and he must be directed to make use of milk, boiled with thrice its quantity of water, for his ordinary drink; and to refrain from flesh.

What to be done, if convulsions or a COMA attend the beginning of the eruption.

C H A P. III.

Of the Pleurisy. *

1. **T**HIS disease, which is one of the most frequent, happens at any time, but chiefly between spring and summer; for the blood, When a pleurisy arises, and whom it chiefly affects.

* *Of the pleurisy.* It has been the custom of almost all authors, when treating of inflammations of the internal parts of the chest, to make a distinction betwixt pleurisy and peripneumony, supposing, that in the former the membrane called pleura was only inflamed, and in the latter the lungs; but the moderns have discovered in dissections, that what the ancients took for an affection of the pleura, was an affection of the membrane investing the lungs. Indeed, if we consider

Sect. 6. blood, being then heated by the fresh approach of the sun, is much disposed to fermentations and immoderate commotions. It chiefly affects the sanguine, and frequently also attacks country people, and such as have been used to hard labour. It generally begins (1.) with a chilness and shivering, which are followed (2.) by heat, thirst, restlessness, and the other well-known symptoms of a fever; (3.) in a few hours (though sometimes this symptom comes much later) the patient is seized with a *violent pungent pain in one side, near the ribs*,* which some-

Its symptoms.

consider the extent of the pleura, we can scarce suppose, that the portion called pleura can be affected without the lungs suffering in some degree; and therefore it is seldom found but these two affections are united in the same disease. Besides, as has been very justly observed, if these diseases had different seats, yet they can scarce ever be distinguished by the symptoms, and to discriminate them would be of little use in practice, inasmuch as they require precisely similar modes of cure. However, Dr. Cullen has arranged them under the genus,

PNEUMONIA, which he defines, A febrile affection attended with pain in some part of the thorax, laborious respiration, and cough; and makes two divisions:

First, PNEUMONIA PERIPNEUMONICA, accompanied with a pulse not always hard, sometimes soft; an obtuse pain of the thorax; a constant difficulty in respiration, which cannot be performed unless the body is in an erect posture; a purple colour of the face, which swells; most commonly a moist cough, often bloody.

Second, PNEUMONIA PLEURITIS, distinguished by a hard pulse, a pungent pain most commonly of the side, increased particularly in inspiration; a great difficulty in lying on the side, with a very painful cough, dry in the beginning, afterwards moist, and often bloody; both of which he considers in different lights as simply idiopathic, complicated, and symptomatic. *Synopsis Nosologiæ Methodicæ*, vol. ii. pag. 98.—W.

* *A violent, pungent pain in one side near the ribs, &c.* The pain is felt sometimes as if it were under the sternum,

Sometimes extends towards the shoulder blades, Chap. 3. sometimes to the spine, and sometimes towards the breast; (4.) a frequent cough likewise afflicts the patient, and occasions great pain by shaking and distending the inflamed parts, so that he sometimes holds his breath to prevent the first efforts of coughing; (5.) the matter expectorated, at the beginning of the disease is small in quantity, thin, and often streaked with blood; but in the course thereof it is more copious, and more concocted, and likewise mixed and coloured with blood; (6.) in the mean time the fever keeps pace, and even grows more violent with the symptoms arising therefrom; till at last, in proportion to the freer expectoration of the morbid matter, both the fever and its dreadful concomitants, as the *cough, spitting of blood, and pain*, &c. abate by degrees.

2. (7.) But the matter productive of this disease does not always undergo such a concoction in the course thereof, as fits it for expectoration; for it frequently remains thin, *and only a small quantity is expectorated,** as in the beginning, and con-

num, sometimes in the back between the shoulders, and when in the sides, its place has been higher or lower, more forward or backward; but the place of all others most frequently affected is about the sixth or seventh rib, near the middle of its length, or a little more forward. The pain, though it is often severe and pungent, is sometimes more dull and obtuse, with a sense of weight rather than pain, and for the most part continues fixed in one place; but sometimes shoots from the side to the scapula on one hand, and to the sternum and clavicle on the other.—Cullen's *Practice of Physic*, vol. i. pag. 366.—*W.*

* *And only a small quantity expectorated, &c.* It is worth observing here, that pleurisies of all kinds, from the gentlest

Sect. 6. consequently the fever and its concomitants remit not at all till they prove mortal. (8.) In the mean time, the belly is sometimes too costive, and at others too soluble, the stools being both frequent and very liquid; (9.) sometimes when the disease proves extremely severe, and bleeding has been omitted, the patient cannot so much as cough, *but having a great difficulty of breathing*,* is almost suffocated by the violence of the inflammation, which is sometimes so very considerable, that he cannot dilate his breast sufficiently for respiration, without very acute pain; (10.) and sometimes, when the inflammation has been violent, and bleeding omitted,

gentlest to the most violent, are frequently met with in practice, which are not accompanied with even the slightest expectoration through all their stages, so that neither the physician or patient ever once have it in their thoughts; and these pleurisies are not at all more dangerous than those attended with expectoration.

* *But having a great difficulty of breathing, &c.* A difficulty of breathing is always present, which is greater or less according to the violence of the disease, and most considerable in inspiration; it is also greater, when the patient is in one posture of his body rather than another; and when he lies on the side affected; but with regard to this, sometimes the contrary happens: very often the patient cannot lie easy on either side, finding ease only when lying on his back; and sometimes he cannot breathe easily, except when in somewhat of an erect posture.—Cullen's *Practice of Physic*, vol. i. pag. 364. *W.*

This difficulty of breathing cannot be said, as Dr. Hoadley supposes, to be owing to adhesions of the lungs in the beginning of the disease; for they are not formed but from its continuance; and though at the latter end, perhaps, they may impede their free action; early therefore in this complaint, the symptom is to be attributed to the congestion of the humours occasioned there by local irritation, and by the pain being increased from the dilatation of this respiratory organ. *W.*

which

which should have been used at the beginning, an imposthume is soon occasioned, the matter being emptied into the cavity of the breast, in which case, though the original fever either goes off entirely, or at least abates, yet the danger is not over; for an empyema and an hectic fever* succeed, and the patient is destroyed by a consumption. Chap. 3.

3. Now though the pleurisy proceeds from that peculiar and specific inflammation of the blood, which usually produces it when it is a primary disease, yet it sometimes accidentally succeeds other fevers, of whatever kind they be, occasioned by the sudden translation of the febrile matter to the pleura, or intercostal muscles. This indeed happens in the very beginning of the fever, whilst the febrile matter is yet in a state of crudity, and not overcome by a due ebullition, and consequently not fitted for a proper separation by the most convenient outlets. But it is most frequently caused by an unseasonable use of such heating medicines, as are usually given by some great ladies to persons in low circumstances; whose charity, in the mean time,

* For an empyema and a hectic succeed, &c. This is the mode of termination sometimes of a pleurisy being injudiciously treated; but, like other inflammations, it may terminate by resolution also, and mortification; but when it has a fatal conclusion, it is most commonly occasioned by the effusion of a portion of the entire mass of blood, either by means of rupture, or of anastomosis into the adjoining cellular texture; whence the matter poured out by compressing the vessels, and stopping the circulation, causes a fatal suffocation. Which, according to Dr. CULLEN, has been proved from dissection; for he advances, that on dissecting almost every person that have died of this disease, it has appeared that such an effusion has happened.—*Practice of Physic*, vol. i. pag. 373.—W.

would

Sect. 6. would be much better placed in feeding the necessitous than in curing their diseases. But this, it seems, they do to raise sweat at the beginning of the disease, little dreaming of the ill consequences thence arising; for nature, being hereby disturbed, is forced to expel the yet crude humours through the first passage that offers; whence the febrile matter is sometimes hurried violently to the *meninges*, and occasions a *delirium*, and sometimes to the *pleura*, and occasions a pleurisy; especially when the age, constitution of the patient, and the season of the year, namely, that between spring and summer, jointly concur thereto: for in that season fevers are apt to turn to pleurisies.

Remarks on
the blood in
this distem-
per.

4. Now the colour of the blood that is taken away in a pleurisy, seems to shew that this disease arises from the sudden translation above mentioned, for at the second bleeding at least, the blood when cold, looks like melted tallow to a considerable thickness, but the top resembles true *pus*, and yet it is very different from that, as being very fibrous like the rest of the blood, and not fluid like *pus*; and upon separating this part from the rest, it appears like a tough fibrous skin; and perhaps it is only the sanguineous fibres, which having lost their natural red covering by precipitation, having hardened into this whitish membrane or pellicle by the coldness of the air; but let it be observed here by the way, that though the blood flows ever so fast, yet if it does not stream horizontally from the open vein, but runs perpendicularly down along the skin, it is frequently of another colour, which I confess I cannot account for, and such a bleeding is also less serviceable. I have likewise

wife observed, that if blood that is newly taken away, be stirred about with the finger, the top will appear of a red florid colour, as in any other disease, in what manner soever it flowed. But whatever be the appearance of the blood, this disease, though it has a bad name; and is in its own nature more dangerous than most others, is easily conquered by proper treatment, and indeed with as much certainty as any other distemper.

5. Having thoroughly considered all the various phenomena of a pleurisy, I conceive it to be only a fever occasioned * by a peculiar inflammation of the blood, whereby nature throws off the peccant matter upon the pleura, and sometimes upon the lungs, whence a peripneumony arises; which, in my opinion, only differs from a pleurisy in degree, and in respect of the great violence, and larger extent of the same cause.

* I conceive it only to be a fever occasioned, &c. This disease is a true inflammation of the pleura, attended with the common symptoms belonging to disorders of this class, and others which are peculiar to the part affected. But there is another disorder, which is called a *spurious* or *bastard pleurisy*, and has for its concomitants a pungent pain in the side, but not deeply seated, only affecting the intercostal muscles; a cough, and difficulty of breathing, but without oppression; disturbance of the pulse, or feverish heat. This complaint is usually occasioned by catching cold, or from a suppression of the catamenia.—Macbride's *Introduction, &c.*

Though Hoffman says it is accompanied with a fever and a hard, depressed, and quick pulse, it is cured by bleeding, abstinence, gentle diaphoretics, and local applications of the stimulating class, such as volatile liniments, warm fomentations, and cataplasms; and in obstinate cases, cupping on the part and blistering. SAUVAGES enumerates no less than twenty-one species; though Dr. CULLEN ranks it as a synonyme with rheumatism. *W.*

Sect. 6.
 Intentions
 of curing
 this disease.

6. *In order therefore to cure this disease,** I have the following ends in view; (1.) to check the inflammation of the blood, and (2.) to make a revulsion

* *In order therefore to cure this disease, &c.* As the remedy chiefly to be depended upon is bleeding, we shall set down the whole of what Dr. Cullen says on this head:

Bleeding is performed with most advantage in the arm of the side affected; the quantity drawn must be suited to the violence of the disease and to the vigour of the patient, and ought to be as large as this last circumstance will allow. The remission of pain and the relief of respiration during the flowing of the blood may limit the quantity to be then drawn; but if these symptoms of relief do not appear, the bleeding should be continued till the symptoms of a beginning syncope come on. It is seldom that one bleeding, however large, will prove a cure of this disease; and although the pain and difficulty of breathing may be relieved by the first bleeding, these symptoms commonly, and after no long intervals, recur; often with as much violence as before; in this case the bleeding is to be repeated, even in the course of the same day, and perhaps to the same quantity as before.

Sometimes the second bleeding may be larger than the first; there are persons, who by their constitutions are ready to faint upon a small bleeding, and in such, this may prevent the drawing so much blood at first as the pneumonic inflammation might require; but as the same persons are found to bear after-bleedings better than the first, this allows the second and subsequent bleedings to be larger, and to such a quantity as the symptoms of the disease may seem to demand. It is according to the state of the symptoms that bleedings are to be repeated; and they will be more effectual, when practised in the course of the first three days than afterwards; but they are not to be omitted, although four days of the disease have already elapsed. If the physician shall not have been called in sooner, or if the bleeding practised during the first days shall not have been large enough, or even although these bleedings shall have procured some remission, yet, upon the recurrence of the urgent symptoms, the bleeding should be repeated at any period of the disease, especially within the first fortnight, and even afterwards, if a tendency to suppuration be not evident; or if, after a seeming solution, the disease shall have

Revulsion of the inflamed particles, fixed upon the *pleura* by proper evacuation. Chap. 3.

Depen-

have again recurred. With respect to the quantity of blood which ought, or which may with safety be taken away, no general rules can be delivered, as it must be very different, according to the state of the disease and the constitution of the patient: in an adult male of tolerable strength a pound of blood, avoirdupois, is a full bleeding; any quantity above twenty ounces is a large, and below twelve a small bleeding. A quantity of from four to five pounds, in the course of two or three days, is generally as much as such patients will safely bear; but if the intervals between the bleedings, and the whole of the time during which the bleedings have been employed, have been long, the quantity taken upon the whole may be larger.

When a large quantity of blood has been already taken from the arm, and when it is doubtful if more can be drawn with safety in that manner, some blood may be still taken by cupping and scarifying. Such a measure will be more particularly proper, when the continuance or recurrence of pain, rather than the difficulty of breathing, becomes the urgent symptoms; and then the cupping and scarifying should be made as near to the pained part as can be done conveniently.—*Practice of Physic*, vol. i.

Some authors have forbid bleeding in those cases where there is a free expectoration, lest that should be checked, on which they think the salutary solution of the disease depends; though it would be extremely wrong to put a stop to, or lessen evacuation of the puriform matter thrown up from the lungs, yet under particular circumstances bleeding is even here adviseable. Dr. HUXHAM says, bleeding is so far from being of service in pulmonic diseases, where expectoration is sufficiently easy and quick, that it often totally checks it, consequently it is no way indicated to be of use, unless there be an apparent plethora, or an acute pain; a difficulty of breathing, or a spitting of pure blood, be so urgent as to require it. Dr. CULLEN asserts, an expectoration takes place sometimes very early in this disease; but if notwithstanding that, the urgent symptoms should still continue, the expectoration must not supersede the bleedings mentioned, and during the first days of the disease its solution is not to be trusted to the expectoration alone. It

Sect. 6. Depending therefore chiefly on bleeding, as soon as I am called in, I order about ten ounces of blood to be drawn from the arm of the affected side, *and the following draught to be taken immediately after the operation.**

The method
of cure specified:

Take

is in a more advanced stage only, when the proper remedies have been long before employed, and when the symptoms have suffered a considerable remission, that the entire cure may be trusted to a copious and free expectoration. During the first days of the disease I have not found bleeding stops expectoration; on the contrary, I have observed bleeding promote it; and it is in a more advanced stage of the disease only, when the patient, by large evacuations and the continuance of the disease, has been already exhausted, that bleeding seems to stop expectoration: it appears to me, that even then bleeding does not stop expectoration so much by weakening the powers of expectoration, as by favouring that serous effusion which is made into the cavity of the bronchiæ, and thereby preventing it.—*Practice of Physic.—W.*

* *The following draught to be taken immediately, &c.* The antiphlogistic method should certainly be persisted in throughout in this species of pneumonic affection; small doses of antimonials, given so as to procure only nausea, joined with saline medicines, are the most efficacious. Diluent drinks, with vegetable acids, should freely be taken, always tepid; and mucilaginous and oily demulcents should be administered, as they serve to allay the acrimony of the mucus, take off irritation, and prevent the too great violence of the cough, which is particularly to be attended to. Blistering upon the part, or as near the part affected as possible, is the best local application to which we can have recourse, and it is more eligible to have fresh blisters repeated, when necessary, than to have the first made perpetual. From the account we have of the use of opium and mercury, sometimes joined with emetic tartar and camphire in inflammatory diseases, and the success attending that practice for the course of eighteen years successively, added to my own experience in the administration of some of them, I do not hesitate in recommending them in cases of pneumonic inflammation. Small doses of calomel and emetic tartar I have given repeatedly with the happiest effects, and

am

Take of the distilled water of red poppies, four Chap. 3.
 ounces; the salt prunella, one dram; syrup of A cooling
 violets, one ounce; mix them together for a draught.
draught.

At the same time I prescribe the following emul-
 sion :

Take seven blanched sweet almonds, the seed of An emul-
 melons and pumpkins, of each half an ounce; sion.
 the seeds of white poppies, two drams; beat
 them together in a marble mortar; then pour
 on by degrees a pint and half of barley water;
 mix them well, and when strained add two
 drams of rose water, and half an ounce of white
 sugar.—Let four ounces be taken every fourth
 hour.

I also ordered pectorals to be taken frequently,
 e. gr.

Take of the common pectoral decoction, a quart; A pectoral
 syrup of violets and maidenhair, of each an ounce apozem.

am fixed in opinion, that mercury adds to the power of the
 antimonial. Dr. Hamilton, in his management of inflam-
 matory diseases, first, orders blood to be taken away in the
 beginning of the disease, in quantities proportioned to the
 violence of the inflammatory symptoms, and the age and
 constitution of the patient; next, the bowels to be emp-
 tied, either by glyster, or (more commonly) by an ecco-
 protic purgative; after which, a composition, consisting of
 from one to five grains of calomel, and from one fourth
 of a grain to one grain of opium, with any conserve, in a
 bolus, in proportion to the strength and age of the pa-
 tient, he exhibits every six, eight, or twelve hours, as the
 degrees of inflammation on the threatening aspect of the
 distemper seem to require; and a plentiful dilution with
 barley water, or any other weak tepid beverage, is at the
 same time strictly enjoined. If the fever was violent, ac-
 companied with a dry, contracted, and arid skin, emetic
 tartar, and sometimes camphire, were added, *W.*

Sect. 6.

and half; mix them together for an apozem, of which let half a pint be taken three times a day.

A pectoral
linctus.

Take of fresh oil of sweet almonds, two ounces of maidenhair and violets, each an ounce; white sugar, half a dram; mix them together, and make a linctus, according to rules of art.—A small quantity of this is to be swallowed leisurely often in a day.

Fresh oil of sweet almonds alone, or linseed oil, is also frequently used with great advantage.

The regi-
men.

7. As to diet, I forbid all flesh meats and the smallest flesh broths, and advise the patient to sup barley broth, water gruel, and panada; and to drink, a ptisan made of pearl barley, sorrel and liquorice roots, &c. boiled in water, and sometimes small beer. And I also prescribed the following liniment:

An emol-
lient lini-
ment.

Take of oil of sweet almonds, two ounces; pomatum and ointment of marshmallows, of each an ounce: mix them together for a liniment, with which let the side affected be anointed morning and night, applying a cabbage leaf thereto.

I direct the above mentioned remedies to be continued the distemper throughout.

Bleeding,
how to be
performed.

8. On the same day (the first of my attendance) if the pain be very acute, I order as much blood to be again taken away; or else the next day, and so the third day; and if the pain and other symptoms rage severely, I bleed in this manner four days running. But if (1.) the disease be less violent and dangerous, and therefore allows me to proceed in a gentler manner; or if (2.) the patient be too weak to bear repeated bleeding

bleeding at such short intervals, then, after Chap. 3.
 bleeding twice, I interpose a day or two between
 every bleeding afterwards. In this case I make
 the contra-indications my rule; considering on
 the one hand the violence of the disease, and
 comparing it with the weakness of the patient on
 the other. And though in the cure of diseases
 I would always be suffered to take away more or
 less blood, as the case requires; yet I have sel-
 dom known a confirmed pleurisy cured in grown
 persons without the loss of about forty ounces of
 blood. In children, however, it is generally
 sufficient to bleed once or twice. Nor does a
looseness, which sometimes happens, obstruct the
 above-mentioned repeated bleeding; for in rea-
 lity it may soon be stopped hereby, without ex-
 hibiting *astringents*.

9. I either refrain from glysters entirely,* or or-
 der only simple ones of *milk and sugar*, and take
 care to have them injected at as great a distance
 between the bleedings as possible.

10. To prevent the patient's being over heat-
 ed during the continuance of the distemper, I The patient
to sit up
some hours
every day.
 allow him to sit up a few hours every day, as
 his strength will permit; which indeed is of such
 moment here, that if he be kept always in bed,
 neither the plentiful evacuations of blood, nor

* I either refrain from glysters entirely, &c. For this
 caution in the exhibition of glysters there can be no neces-
 sity, practice confirms their utility. Some practitioners,
 says Dr. CULLEN, have doubted if purgatives can be safely
 employed in this disease; and indeed a spontaneous diar-
 rhœa occurring in the beginning has seldom proved useful;
 but I have found the moderate use of cooling laxatives ge-
 ncrally safe, and have always found it useful to keep the
 belly open by frequent emollient glysters.—*Practice of Phy-*
sic, vol. i.—W.

Sect. 6. the most cooling remedies, will sometimes at all avail in conquering the symptoms above specified.

A purge,
when to be
given.

11. Immediately after the last bleeding, and sometimes before, all the symptoms abate, and the patient soon recovers his former strength, when it is proper to give some gentle purgative: and he should be debarred for some days longer from gross foods, and all kinds of spirituous liquors.

Why expecto-
ration is not
treated of.

12. But if it be said here, that our method is defective, because we are so far from treating amply of the means of promoting expectoration in the different stages of the disease, that we scarce mentioned them; we reply, that this has not been omitted through negligence, but purposely, after mature consideration, as having always judged those to be in great danger who trusted the cure of this disease to expectoration. For not to mention the tediousness of this method, by which nature endeavours to expel the morbid matter, it is likewise unsafe; for it often happens that part of the matter being concocted, and perhaps expectorated, the remainder continues yet crude, and this successively: the most powerfully expectorating medicines having been ineffectually used. For sometimes expectoration goes on very well, and at others is quite stopt, the patient, in the mean time, being on all sides endangered, and as I have not the least power over expectoration, it is equally uncertain whether the distemper will end in his recovery or death. Whereas, on the contrary, by bleeding, the morbid matter is brought under my management, and the orifice of the opened vein may be made to supply the
function

Advantages
of bleeding.

function of the windpipe. Moreover, I positively affirm that this disease, which is justly reckoned amongst the most fatal when treated according to the method we have condemned, may be cured with as much certainty and safety* as any other disease, by the method just laid down, not to mention the short time wherein the cure is completed: nor have I ever known a person in the least injured by the loss of so large a quantity of blood, which the unskilful seem to apprehend.

13. I have indeed frequently endeavoured to discover some other method that might prove equally effectual without bleeding so copiously, viz. either (1.) by resolving the humour, or (2.) by expelling it by expectoration; but have not hitherto found one of equal efficacy with that above delivered; whereby (notwithstanding the fatal prognostic *Hippocrates* hath left us concerning a dry pleurisy) I recovered the patient without waiting for expectoration.*

14. But

* *May be cured with as much certainty and safety, &c.* There is little doubt, but the methods above laid down being judiciously pursued, will prove successful in common inflammatory pleurisies, where there is a strong tone of the vascular system and firm texture of the blood; but when these inflammations take place in constitutions where the crasis of the blood has been previously injured by a putrefactive acrimony; or when they are complicated with fevers occasioned by infectious miasmata, then the symptoms of extreme weakness and dejection, sickness and vomiting, petechiæ and delirium, will be found superadded to the pain in the chest, cough, oppression, and difficulty of breathing. These complicated pleurisies and peripneumonies are constantly mortal, because the extreme weakness and dejection hinder the large and repeated bleedings, which are the only things capable of removing the inflammation.—*Macbride's Introduction.—W.*

* *I recover the patient without waiting for expectoration, &c.* Dr. Barker says, this disease is sometimes cured without

Sect. 6,
 The tendon
 sometimes
 pricked by
 bleeding.

14. But as the cure of this disease chiefly consists in repeated bleeding, which, in country towns, is frequently performed by unskilful operators,

out the use of any other remedy but bleeding and diluting liquors; but it is not bleeding which performs the cure; for all that can be done possibly by this evacuation, is to mitigate the symptoms, and nature afterwards carries off the disease by a kindly resolution or concoction of the febrile matter: there can, however, be no doubt but it is better to attempt to carry off the disease by *resolution* than *expectoration*; though this, it is to be feared, is hardly ever accomplished, and the disorder resolved without some expectoration: hence, amongst the prognostics, a dry cough is an unfavourable symptom, particularly if there is much oppression and difficulty in breathing. But when resolution does take place, it is Dr. CULLEN's opinion, that it seldom happens without some evident evacuation. Upon the first days of the disease an hæmorrhage of the nose coming on, has sometimes terminated it; and it is said, that an evacuation from the hæmorrhoidal veins, a bilious evacuation by stool, or an evacuation of urine with a copious sediment, have severally had the same effect; but such occurrences have been rare and unusual. The evacuation most frequently attending, and seeming to have the greatest effect in promoting resolution, is an expectoration of thick, white, or yellowish matter, a little streaked with blood, copious, and brought up without either much or violent coughing. Very frequently the resolution of this disease is attended with, and perhaps produced by sweat, which is warm, fluid, copious over the whole body, and attended with an abatement of the frequency of the pulse, of the heat of the body, and of other febrile symptoms.—*Practice of Physic*, vol. i.

But besides this mode of termination, there are others, viz. by *effusion*, of which we have spoken *note* *, pag. 367, which, if it does not immediately destroy by suffocation, may be the source of suppuration; and that such effusion has taken place, is discoverable from the increase of the dyspnœa, the patient being in an horizontal posture, or lying more easily on the affected side.—In a *VOMICA*, which in its formation is attended with slight, cold shiverings, the pulse commonly becoming slower and more soft, though sometimes it will be more frequent, and fuller than before.

But

rators, who often prick the tendon, whereby the Chap. 3.
the limb, and consequently life, is endangered, I judged it not amiss to subjoin here the method of curing this accident.

15. *In a puncture of the tendon the patient* * does not immediately feel pain, but twelve hours after
How this accident is to be remedied.

But when it is actually formed, the pain formerly existing decreases greatly, though the cough and difficulty of breathing continue, or are rather augmented, the pulse becomes more frequent, the febrile affections increase every evening, and a true hectic gradually succeeds. In an EMPYEMA, which succeeds the termination of the pneumonic disease by suppuration, often coming on after a vomica, there is a remission of pain, whilst the dyspnoea, cough, difficulty of lying down, and hectic fever continue, and often accompanied with a sensation of some liquid fluctuating in the breast, and symptoms of a thoracic dropsy; and in a gangrene, which is much more rare than has been imagined, but when it does occur, it is usually joined with the termination by effusion, and the symptoms of one is hardly to be distinguished from the other. See Note, pag. 367. W.

* *In a puncture of the tendon, the patient, &c.* There seems to be a material difference between the account of our author and the indefatigable HEISTER, who says, the patient feels so acute a pain the moment the puncture is made, that he can scarce refrain from crying out aloud, especially if it continues, which is soon succeeded by a tumour, inflammations, spasms, and a stiffness of the limb also; and these, unless seasonably remedied, by exceeding dangerous convulsions, and at length a gangrene, and death in a very short time. The reason of this difference appears to be from the one taking his idea from the wounding of a nerve, the other of a tendon, both which may happen at the same time. However Mr. Jones, who speaks practically, favours the opinion of SYDENHAM, and says,

“ Sydenham’s account of the symptoms is a very good one, and may be depended upon: but though, as he hints, the swelling near the orifice is not so big (or eminent) as a hazel nut, unless an abscess forms there, yet there is generally a swelling, or enlargement of the arm, and below it too in the course of the bending muscles that arise from the internal condyle of the *os humeri*, and
 “ near

Sec. 6. ter the operation it begins, and is not so much
 perceived in the orifice lately made as in the parts
 reach-

“ near it, and generally some pain there also, though it
 “ seldom goes far down the arm. But the chief pain and
 “ swelling commonly extend from the orifice upwards,
 “ much in the course that this accurate writer describes.
 “ A peculiarity of this case is, that (notwithstanding the
 “ pain and swelling, together with a *certain* inflammation)
 “ a redness of the skin is hardly ever very manifest, espe-
 “ cially in fat persons, till an abscess is considerably ad-
 “ vanced; which, however, seldom happens, and it is un-
 “ certain where it will fall. I have opened some in the
 “ armpit and near it, as well as near the orifice and above
 “ it. As to what is quoted from the judicious and indefa-
 “ tigable *Heister*, so far as it relates to the puncture of the
 “ tendon from bleeding, I am obliged to dissent from him,
 “ and to give a different account of the matter.—It has hap-
 “ pened, (though I never was so unfortunate as to occasion
 “ one) that I have met with several cases, where the *biceps*
 “ tendon and its *fascia* have been pricked without the in-
 “ stant intolerable pain, or the dismal train of consequences
 “ which he asserts attends it. The method of treating this
 “ accident consists in curing the inflammation, which gene-
 “ rally is an easy matter. When it is first perceived, the
 “ orifice should be dressed *superficially* with a pledget of di-
 “ gestive, and the application renewed twice in twenty-
 “ four hours, and the limb, so far as it is affected, should
 “ be covered with soft double linen rags, moistened with
 “ equal parts of olive oil and vinegar; or if any one likes
 “ it better, a soft poultice may be applied in its stead,
 “ made of oatmeal, oil, and vinegar. Neither the mix-
 “ ture nor the poultice need be much warmed; and if the
 “ accident could be discovered directly, or the case for
 “ which the patient was bled did not forbid it, these
 “ applications would be more properly used cold.
 “ After these dressings have been used two or three days,
 “ the parts should be well fomented, (for which purpose
 “ vinegar and water seem to be as proper as any thing)
 “ and the other dressings applied as before directed, with
 “ this difference however, that now they should be laid on
 “ as warm as the patient can bear them without the *least*
 “ pain. This method may be continued till the patient is
 “ just cured, which by proper management is generally
 “ accom-

reaching up to the armpit, where at length the Chap. 3.
 pain fixes, and is chiefly felt upon extending

“ accomplished in about ten days, and often in less. If the
 “ forming of an abscess be discovered, regard must be had
 “ to that, and the cure will take up more time. Some-
 “ times slight disorders attend the skin from acids lying
 “ constantly on it; in which case the vinegar must be oc-
 “ casionally omitted, &c. I know of nothing farther ne-
 “ cessary to be mentioned under the head of external ma-
 “ nagement, unless that the bandage which is used to
 “ keep the dressings on, ought by no means to be in the
 “ least degree painfully tight—that the arm be easily and
 “ entirely supported—and lastly, that it be constantly kept
 “ bended, and never suffered to be extended till the patient
 “ is well.

“ As to the internal treatment, the patient should be
 “ bled, and take cooling purges as occasion requires.
 “ Nitre given often is proper likewise, and a low diet quite
 “ necessary.”

But from the more modern practitioners we collect, that
 when a nerve is wounded, and variety of alarming symptoms
 comes on in proportion to the fineness and tenderness of the
 part to which it is attached, and the peculiar irritability of
 the constitution; when the pain occasioned thereby is ex-
 treme, it is sometimes absolutely necessary to divide the
 nerve from whence only relief can be procured. A sharp
 ichor flowing from the wound, and excoriating the sur-
 rounding parts, discovers the accident.

The same symptoms nearly succeed the wounding a ten-
 don, but are slower in their appearance; in which case the
 limb should be placed in the most easy situation, guarding
 the wound well from the admission of the cold air, applying
 the common milk and bread poultice, first covering the
 wound with lint; or instead of the poultice, warm oil, or
 equal parts of warm oil and vinegar absorbed in linen rags:
 if inflammatory symptoms appear, warm fomentation may
 be used, before the application of the cataplasm. This
 gentle method will generally be successful, and avoid all
 those inconveniences which were apt to arise from the use
 of those strong stimulants to which it was usual on this oc-
 casion to have recourse; lint dipped in equal parts of the
 aqua lythargyri composita, and tinctura opii, *Pharmaco-*
pœiæ Londinensis, 1788, is an effectual application. *W.*

the

sect. 6: the aim. The part affected does not swell much, the tumour not exceeding a hazel nut; but an aqueous humour, or *ichor*, continually flows from the orifice, which in reality is esteemed the principal sign of a punctured tendon. I have known it cured by the following application:

An emollient cataplasm.

Take of the roots of white lilies, four ounces; boil them till they become soft in a quart of milk; then take oatmeal and linseed flower, of each three ounces; boil them to the consistence of a cataplasm in enough of the milk, strained from the white lily roots, and having bruised the roots, mix them therewith for a cataplasm, to be applied hot every morning and night to the part affected.

C H A P. IV.

Of the Bastard Peripneumony.*

The rise of the bastard peripneumony. I. **A** FEVER, attended with several peripneumonic symptoms, arises every year towards the beginning, but more frequently at the

* *The bastard peripneumony.* There is no little disagreement amongst authors with respect to this complaint; SYDENHAM seems to be amongst the first who knew this disease distinctly; SAUVAGES has arranged it amongst the species of peripneumony; under the title of *Peripneumonia Catarrhalis*, and has there copied precisely his account. Dr. CULLEN considers it as a variety of the simple idiopathic peripneumony; and thinks that the bastard differs only in degree from the true peripneumony; and states the difference from the inflammation being milder, and the afflux of humours upon the lungs more copious in the latter than the former—For since, says he, in the bastard peripneumony the symptoms of fever, dyspnoea, pain, and cough may

the close of winter. It chiefly attacks such as Chap. 4.
 are of a gross habit of body, and middle-aged persons, but oftener those who are more advanced

may have affected patients in different degrees and modes, it is not at all to be wondered at, if the descriptions of this disease amongst various authors have not been perfectly uniform; and that the disease described by different authors under this name may not have, in fact, been the same, should have raised some doubts in the mind of the learned MORGAGNI. Yet, all the things which have been advanced on this subject being well considered and compared with many observations made by the patients themselves, I do not doubt but the disease described by SYDENHAM and BOERHAAVE under the title of spurious peripneumony may be one and the same, nor do I think that the disease observed by VALSALVA in Franciscus Coralius, and by MORGAGNI himself in the celebrated Antonius Valisnerius could have been different from that in reality.—*Synopsis Nosologiæ Methodicæ*, vol. ii. *nota in pagina*, 100.

Dr. MACBRIDE is, though, of a very different opinion, and places this disease amongst asthmatic complaints, under orthopnoea, and arranges it as an idiopathic variety. He says the *peripneumonia notha*, or bastard peripneumony, is a very different distemper from the *peripneumonia vera*; for there is neither extraordinary heat, thirst, nor pain; and whereas the true inflammatory peripneumony generally attacks the robust, vigorous, and active, and is the most frequent in cold, dry weather, during north-east winds, and high stations of the barometer; so this bastard peripneumony commonly seizes the old and phlegmatic, the weak and lax, the fat and unwieldy, and is most rife in wet and slabby situations, and in foggy weather, and winter seasons; all which circumstances point out, as the cause, an accumulation of serum in the cellular cavities of the lungs; whence great oppression in the air vessels, and some degree of obstruction in the pulmonic and bronchial arteries, thereby hindering the free and regular circulation of the blood. He farther attempts to account for the confusion amongst authors with respect to the theory of this disease, from their not making the necessary distinction between the cellular and tubular part of the lungs, and by supposing that the offensive matter chokes up the extremities of the pulmonary artery; since the symptoms cannot be satisfactorily accounted

Sect. 6.

vanced in years, and too much addicted to spirituous liquors, especially to brandy. For as the blood of such persons hath been loaden with phlegmatic humours collected in the winter, and is put into fresh motion by the approaching spring, a cough is hereby immediately occasioned, whence these humours hurry to the lungs; and then if the patient happens to live irregularly, and drinks more freely of spirituous liquors, the matter occasioning the cough grows thick, and stops the passages of the lungs, and the fever wastes the mass of blood.

Its symptoms enumerated.

2. At the beginning of the fever, (1.) the patient grows hot and cold alternately; (2.) is giddy; and (3.) complains of an acute pain in the head when the cough is most troublesome; (4.) he vomits up all liquids, sometimes with, and at other times without coughing; (5.) the urine is turbid, and intensely red; (6.) the blood taken away resembles pleuritic blood; (7.) he breathes quick, and with difficulty: if he be advised to cough, his head aches as if it would burst, for so the patient generally expresses himself; (8.) a pain of the whole breast accompa-

accounted for on the supposition that the morbid matter is lodged in any other place than the cellular interstices; whereby it presses upon the air vessels and the blood vessels, hindering the first from being fully distended with air, and the last from transmitting the blood.—*Introduction to the Theory and Practice of Physic.*

From all which account, however, we may venture to draw this conclusion, that the disease is owing to a serous or pituitous defluxion on the lungs, attended with some slight inflammatory symptoms: this complaint is very often extremely deceitful, the most fatal effects being produced sometimes under the mildest symptoms in the beginning; occasioning sudden dissolution before the severity of the symptoms indicate so fatal a catastrophe. *W.*

nies

nies the disease, and (9.) a wheezing is heard Chap. 4.
 by the attendants whenever the patient coughs, }
 the lungs not being sufficiently dilated, so that
 the vital passages seem to be closed by the swell-
 ing; whence the circulation is so intercepted,
 that there are no signs of a fever, especially in
 gross habits; though this may likewise happen
 from the abundance of the phlegmatic matter,
 whereby the blood is so furcharged, that it can-
 not rise to a perfect ebullition.

3. *In order to the cure of this fever,** I judge Intentions
 it proper, (1.) to take away that blood which of cure to
 inflames the lungs, and endangers suffocation; be answered.
 (2.) to

* *In order to the cure of this fever, &c.* The chief indi-
 cation of cure here is to evacuate the lungs from the serous
 or pituitous congestion there formed; for which purpose
 bleeding promises not to be efficacious, unless the catar-
 rhal and pneumonic symptoms are immediately considerable,
 then a bleeding may be necessary, otherwise there will
 scarce be a necessity for this operation. And when, says
 Dr. CULLEN, an effusion is to be feared, the repetition of
 blood-letting may be very hurtful: BOERHAAVE advises
 only a single bleeding, but highly extols laxative glysters,
 bathing, and blistering. Indeed our chief dependence is
 in vomiting and blistering, in order to promote the evacua-
 tion of the offending cause, and increasing the action of
 the absorbent system. Full vomiting may, according to
 Dr. CULLEN, be frequently repeated; and nauseating
 doses ought to be constantly employed; gentle laxatives are
 here necessary, purging is seldom useful; the antiphlogistic
 method should be persisted in, cold guarded against, and
 much external heat carefully avoided; and we may endea-
 vour to bring on gentle sweats by mild tepid liquors only.

The most proper emetic is either the *antimonium tartari-*
fatum, or *vinum antimonii* of the *London Pharmacopœia*,
 1788; and in order to make the agitation from the puking
 stronger, little ought to be drank after it: the blisters
 should be laid on the back, sides, and arms, which are
 also to be bathed. Should these remedies be inefficacious,
 and the wheezing should continue laborious, with great

Sect. 6. (2.) to open and cool the lungs by pectoral medicines; and (3.) to abate the heat of the whole body by a cooling regimen. But as, on the other hand, the collection of the phlegmatic matter contained in the veins, and daily affording fresh supplies for the inflammation of the lungs, should seem to indicate frequently repeated bleeding; yet, on the other hand, I learnt, from the most accurate observation, that this practice proved very prejudicial in feverish persons of a gross habit, especially if they were past the prime of life; so that bleeding with frequency was equally contra-indicated. I therefore had recourse to frequent purging in its stead, which is properly enough substituted, where the patient hath an aversion to copious and frequent bleeding.

The method
of cure par-
ticularised.

4. Accordingly I proceeded in the following manner; I directed bleeding in the arm in bed, and forbid the patient to rise till two or three hours afterwards; because bleeding, which in some measure weakens the whole body, may by this means be more easily borne; for the patient can better bear to have ten ounces taken away in bed, than six or seven when he sits up. The following day I give *this purging draught** in the morning:

Take

anxiety, and intolerable oppression of the præcordia, and at the same time a constant dosing, coldness of the extremities, and a livid colour in the face and hands, we may expect the scene will soon close fatally. *W.*

* *I give this purging draught, &c.* This purging draught is a very odd and inelegant prescription, and withal an exceeding nauseous medicine. Much neater, as well as more palatable forms are directed every day by most physicians; and no wonder, as the art of prescribing is considerably improved

Take of fresh pulp of cassia, one ounce; liquorice Chap. 4.
 root, two drams; four figs; sena, two drams A purging draught.
 and a half; troches of agaric, a dram; boil
 them in water sufficient to leave four ounces of
 liquor when strained, in which dissolve an
 ounce of manna, and half an ounce of solutive
 syrup of roses: mix the whole for a purging
 draught.

5. The next day I usually repeat the bleed-
 ing, and interposing a day, I exhibit the purg-
 ing draught again, which is to be repeated every
 other day till the patient recovers. On the in-
 termediate days of purging I advise the use of a
pectoral decoction, oil of sweet almonds, and the
 like remedies. In the mean time I forbid flesh,
 and broth made thereof, but especially all spi-
 rituous liquors; and instead of these I allow him
 a ptisan made of *barley and liquorice boiled in wa-
 ter* for his common drink, or small beer, if he
 desires it.

6. This is the method of curing the *bastard* The regi-
 men.
peripneumony, caused by an abundance of phleg-
 matic humours collected in the blood, and, by
 reason of the coldness, and moisture of the
 winter, thrown upon the lungs; wherein both
 repeated bleeding and purging are indicated,
 otherwise than in a *true peripneumony*; which I

improved since our author's time in point of simplicity,
 elegancy, and agreeableness, and perhaps efficacy too.—
 Let me add, therefore, here once for all, that though I do
 not chuse to swell the notes with remarks and animadver-
 sions on every one of his prescriptions (which the skilful
 physician knows how to correct and adapt to his intention,
 and likewise to vary as the circumstances require) yet there
 are several scattered up and down in his works, against
 which the same objections might with equal reason be made.

Sect. 6. esteem to be manifestly of the same kind with the *pleurisy*, with this difference only, that a peripneumony does more universally affect the lungs. And indeed both distempers are cured by the same method, namely, by bleeding chiefly, and cooling medicines.

Wherein the disorder differs from a *dry asthma*. 7. Though the *bastard peripneumony* in some measure resembles the *dry asthma*, both in the difficulty of breathing, and some other symptoms, yet it is sufficiently distinguished from it, as being attended with manifest signs of a fever and inflammation, which never appear in a *dry asthma*; but they are much less considerable and apparent in the *bastard peripneumony* than in the *true peripneumony*.

8. It must be carefully remarked, that when this disease attacks such as have been great drinkers of brandy and other like spirituous liquors, it is by no means safe to quit them of a sudden, but they must be left off gradually; for so sudden a change makes way for a dropsy: and this should be made a standing rule in all other diseases arising from the same cause. Since I have mentioned brandy, I will observe by the way, that it were indeed to be wished, either that it was wholly forbid, or at least used only to recruit the spirits, and not to occasion a stupefaction; or that it was totally prohibited to use it internally, and only allowed to be applied externally by surgeons in fomentations, to digest ulcers, or to *heal burns*.* For, in the last case,

* *To heal burns, &c.* This application can only be considered thus useful in the slighter affections from this cause; many things therefore will be equally beneficial, which will prevent the effects, or take off the force of irritation.

case, it excels all other applications hitherto known, as it preserves the *cutis* from putrefaction, and on this account speedily finishes the cure, without waiting for *digestion*, which runs through its stages very slowly. For this purpose let a piece of linen, dipt in *brandy*, or *spirit of wine*, be immediately applied to the parts scalded with hot water, burnt with gun powder, or the like, and renew the application between whiles, till the pain ceases, and afterwards apply it only twice a day.

Chap. 5.

Spirits of wine excels lent in burns.

C H A P. V.

Of the Rheumatism.*

I. **T**HIS disease happens at any time, but especially in *autumn*, and chiefly affects such as are in the prime of life. It is generally occasioned by exposing the body to the cold air, immediately

The rheumatism how caused, and when it arises.

Cold water, rectified spirits, absorbed in linen, and repeatedly applied till the pain abates; after which camphorated spirits of wine may supply their place; but if membranous or tendinous parts be affected, oil should be mixed with spirits, to prevent the parts from being crisped or contracted.

The white of eggs beat thin; a handful of common salt dissolved in a quart of vinegar; oil of turpentine; volatile spirits; a solution of the aqua lythargyri acetati, in water and spirits, may be also had recourse to for the above purposes. Oil of olives, or linseed oil applied warm is recommended; or holding the part to the fire as long as the patient can bear it. *W.*

* *The rheumatism, &c.* What our author speaks of in the former part of this chapter is the acute rheumatism, and considered by most of the nosologists to belong to the class

Sect. 6. immediately after having heated it by violent exercise, or some other way. It begins (1.) with a chiliness and shivering, which are soon succeeded (2.) by heat, restlessness, thirst, and

Its symp-
toms.

of inflammatory diseases. Dr. CULLEN arranges it under his order of phlegmatia, and defines it briefly, A disease arising from an external, and most commonly from an evident cause; attended with febrile affections; pain about the joints following the course of the muscles, attacking the knees and the larger joints, rather than those of the hands and feet, and increased by external heat.

There is not a perfect agreement amongst authors with regard to the proximate cause; Dr. MACBRIDE, and others suppose it to arise from a peculiar acrimony, nearly allied to the gout, if we judge from the appearances, but yet as distinct from it, as that which gives rise to the measles, is from that which occasions the small pox: in the rheumatism the morbid matter fixes on the muscles together with their common membrane, and the tendons; whereas the arthritic acrimony is directed to the ligaments which connect the joints.

It has also by many been conjectured to arise from a lentor of the fluids obstructing the vessels of the part affected.

Dr. CULLEN is of opinion that the most common remote cause is usually the same with that of other inflammations not depending upon a direct stimulus; and says in proof, "That the common remote cause of this disease is cold applied, which operates especially on the vessels of the joints, from these being less covered with cellular texture than those of the intermediate parts or the limbs. And supposes farther, that the application of cold produces a constriction of the extreme vessels on the surface, and at the same time an increase of tone, or phlogistic diathesis in the course of them, from which arises an increased impetus of the blood, and at the same time, a resistance to the free passage of it, and consequently inflammation and pain; likewise that the resistance formed excites the vis medicatrix to a farther increase of the impetus of the blood; and to support this, a cold stage arises, a spasm is formed, and a pyrexia, and phlogistic diathesis are produced in the whole system."—*Practice of Physic*, vol. ii.—W.

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the other concomitants of a fever; (3.) in a day or two, and sometimes sooner, there arises an acute pain in some or other of the limbs, especially in the wrists, shoulders, and knees; which, shifting between whiles, affects these parts alternately, leaving a redness and swelling in the part last affected. (4.) In the beginning of the illness, the fever and the above-mentioned symptoms do sometimes come together; but the fever goes off gradually, whilst the pain continues and sometimes increases, occasioned by the derivation of the febrile matter to the limbs; which the frequent return of the fever, from the repulsion of the morbid matter by external remedies, sufficiently shews.

2. This disease, when unattended with a fever, is frequently *taken for the gout*; though it differs essentially* therefrom, as will easily appear to

Chap. 5.
Often taken for the gout.

* Taken for the gout; though it differs essentially, &c. In the *rheumatism* the muscles, together with their common membrane, and the tendons where they are inserted into the bones, are affected with a violent pain and spasms in the limbs and other parts of the body; but in the *gout* the tendinous nervous ligaments, whereby the bones are joined together, inasmuch as they unite with the *periosteum*, are more vehemently affected. But as in a beginning *gout* the pain is seated more in the surface of the ligaments; so in an obstinate one, the vitiated humour, which occasions the pain, is more deeply seated in the joints. There is also this difference between the *gout* and *rheumatism*; the *gout* returns with greater frequency, gives more pain, lasts longer, and is harder to be cured; but the *rheumatism* sometimes seizes a person only once or twice during his life, and does not last so long, and is more easily cured. The pain likewise often differs in the two diseases; for in the *rheumatism* it is more tensive, heavy, joined with cold, without any remarkable tumour and redness; but in the *gout* it is tearing, pungent, and as it were threatens the

Sect. 6. to those that are thoroughly acquainted with both diseases; and hence it is perhaps that physical authors have not mentioned it, unless indeed we esteem it a new disease. But however this be, it is at present very frequent, and though when the fever is gone off, it seldom proves fatal, yet the violence of the pain, and its long continuance, render it no contemptible disease. For, in case of wrong management, it frequently remains not only several months, but some years, nay even during life; though in this case it is not equally painful, but has its periodical returns, like the gout: and the pain may possibly go off spontaneously, after it has been of very long standing. But in the mean time the patient is deprived of the motion of his limbs during life, the joint of the fingers being contracted inwards, with stony concretions as in the gout, which appear more in the internal parts of the fingers than the external, whilst the appetite may be very good, and the general health not amiss.

A stubborn, but not a dangerous disease.

Another species of this disease.

3. There is another species of this disease, though it is not generally esteemed of this kind, which may properly be called a *rheumatic lumbago*. It is a violent fixt pain of the loins, reaching sometimes to the *os sacrum*, and resembling a nephritic paroxysm; only the pa-

bursting of the part affected, which appears to be much swelled and red.—Hoffman. tom. ii. pag. 317.

Add to this, the gout always arises from an internal cause, is most commonly preceded by a flatulence, indigestion, and affections of the stomach; affects the small joints more than the large; the parts affected being more acutely painful to the touch than in the rheumatism, and the retrocession to the internal parts more common, creating there affections more excruciating and dangerous. W.

tient

tient does not vomit. For, besides the intolerable pain near the kidneys, the whole conduit of the ureters, even to the bladder, is sometimes affected with the same, though in a less degree. *And I have formerly been led into an error hereby,** as imagining it to arise from some gravel lodged in those parts; whereas in reality, it proceeds from the peccant and inflamed matter of the rheumatism, which affects only those parts, leaving the rest of the body free. Unless this acute pain be removed in the same manner as the former species, it continues as long, and proves equally violent; so that the patient cannot lie in bed, but is forced either to leave it, or sit upright therein, and be perpetually bending his body backwards and forwards.

4. Since both the kinds of this disease seem to arise from inflammation, as appears from their concomitants just mentioned, and especially by the colour of the blood taken away, which exactly resembles that of persons in a pleurisy, which is universally allowed to be an inflammatory disease; so I judge that *the cure ought to be attempted only by bleeding, †* the heat of the blood being

Both the kinds caused by inflammation.

** I have formerly been led into an error hereby, as, &c.* This error may be generally avoided, I should have said always, if I had not paid great regard to the observations of our author, by attending to the particular circumstances of motion in patients thus affected; for in the lumbago, when the muscles of the back are put into motion, particularly in stooping, rising, or twisting the body with any degree of quickness, the pain is greatly increased, so much as to check the effort in performing such action, which in nephritic complaints is very seldom, if ever, the case. *W.*

† The cure ought only to be attempted by bleeding, &c. Bleeding is certainly the remedy to be depended upon in the

Sec. 6. being in the mean time abated by cooling and thickening medicines, along with a proper regimen.

How to be treated.

5. Accordingly as soon as I am called, I order ten ounces of blood to be immediately taken away from the arm of the side affected, and prescribe a *cooling and incrassating julap*,* nearly after the following manner :

A cooling julap.

Take of the distilled waters of lettuce, purslain, and water lily; each four ounces; syrup of lemons, an ounce and half; syrup of violets, an ounce: mix them together for a julap, of which

the acute rheumatism, and that at first exhibited freely, with regard to repetition and quantity; strict attention being paid to the constitution of the patient. If the habit should be plethoric; the pulse frequent, full, and hard; and the pain violent, the quantity drawn may be copious, and the operation may be frequently repeated according to the urgency of the symptoms; if not, caution is requisite, for if we exceed the proper limits, and carry this beyond what the strength of the patient will easily bear; we shall retard the recovery, and run the risque of bringing on a rheumatism of long duration, by too much debilitating the system. If any severe swelling or inflammatory appearance attack the joints, and this yields not to general depletion; local bleeding will be useful; cupping, or applying leeches to the parts, and these will often procure relief. *W.*

* *A cooling and incrassating julap, &c.* In people of athletic habits, we should begin with nitre, which is in these cases an excellent remedy; two drams dissolved in a quart of water gruel, and sweetened; of which a tea-cup full may be taken every two hours, will better supply the place, and be more effectual; but if the stomach rejects this, the saline mixture may be given, or one made with the ammonia acetata, *P. L.* 1788. It would also add to their efficacy if small portions of antimonium tartarifatum were added to each dose.

To the attempt of curing this disease by these means many have preferred sweating, after some general bleedings, which should be conducted by the gentlest means, not forced by any heating or powerful cordials; for the means see *note*, pag. 128. *W.*

let the patient drink at pleasure; or of the *Chap. 5.*
emulsion above set down in the cure of the }
pleurisy.

To ease the pain, I order a *cataplasma*,* prepared ^{The regi-}
of the crumb of white bread, and milk, tinged ^{men.}
with saffron, or a cabbage leaf to be applied to
the part affected, and frequently renewed. *With*
respect to diet, † I enjoin a total abstinence from
flesh, and even the thinnest flesh broths; sub-
stituting in their place, *barley broth, water gruel,*
panada, and the like. I allow only small beer
for drink, or, which is more proper, a ptisan
prepared of *pearl barley, liquorice, sorrel roots,*
&c. boiled in a sufficient quantity of water:
and I advise the patient to sit up some hours
every day, because the heat which proceeds
from lying always in bed, promotes and in-
creases the disease.

6. The next day I repeat the bleeding in the
same quantity, and in a day or two after, as ^{Bleeding,}
^{how often to}
^{be used.}

* *To ease the pain I order a cataplasma, &c.* Gentle sti-
mulants joined with camphire, and blisters, are recom-
mended to be applied to the pained parts; these will give
relief, with respect to the topical affection; but after proper
depletion, fomentations made of white poppy heads in
which crude sal ammoniac is dissolved, and afterwards rub-
bing the parts with volatile liniment and tincture of opium,
are of infinite benefit. But should the joint be defective
in freedom of motion, from any stiffness or numbness re-
maining from the long continuance of pain, local vapour
bath, warm bathing, and gentle exercise, with some emol-
lient embrocations, will remedy the inconvenience. *W.*

* *With respect to diet, &c.* The thin vegetable, or milk
diet should be persisted in through the whole course of the
violence of febrile affection, such as roasted apples, gruel
with currants, milk, milk whey; but when the fever begins
to abate, weak wine, whey, or that made of mustard seed
may be allowed. *W.*

the

sect. 6. the strength will allow, I bleed again; then interposing three or four days, as the strength, age, constitution of the patient, and other circumstances indicate, I bleed a fourth time, which is generally the last, unless too hot a regimen has preceded, or heating remedies have been exhibited without necessity. *But the use of opiates* * requires more copious bleeding; and therefore, though the pain be ever so violent during the whole course of the disease, yet when I intend to effect the cure solely by bleeding, I judge it highly necessary to refrain from opiates, because the disease is fixed thereby, and does not yield so readily to bleeding; so that where such medicines are given too frequently, bleeding must in consequence be oftener repeated than is otherwise necessary. Besides, in the height of the disease, they do not answer the expectations we have conceived of them.

Inconveniences attending the use of opiates.

7. *Whilst the above-mentioned remedies and regimen are carefully continued, I inject glysters made of † milk and sugar, between times, on the interme-*

* *But the use of opiates, &c.* As the violence of the pain is apt to increase towards the evening, some have been tempted to give opiates; which practice has by others been reprobated, as tending only to aggravate and prolong the disease. Dr. CULLEN says, they always prove hurtful in every stage of the disease, except when they are directed to promote sweat; joined, therefore, with calomel, tartar emetic, and camphor, according to Dr. Hamilton's method, the objection may be removed; from being coupled with tartar emetic and calomel I have seen great benefit derived. *W.*

* *Whilst the above-mentioned remedies, &c.* Purging with the neutral salts has been considered useful, inasmuch as they tend to take off the phlogistic diathesis; which may occasionally be repeated during the disease, at least they should

intermediate days of bleeding; earnestly re- Chap. 5.
 commending the exact observance of these di-
 rections, for at least eight days after the last
 bleeding; and then I prescribe a gentle purging Purging,
when pro-
per.
 potion to be taken in the morning, and in the
 evening a large dose of *syrup of white poppies*
 in *cowslip-flower water*; whereby a check is put
 to the tumultuary motion of the blood, which
 might otherwise endanger a relapse. This being
 done, I allow the patient to return by degrees
 to his customary way of living, in relation to
 diet, exercise, and air; but at the same time
 caution him to refrain, for a considerable time,
 from wine and all spirituous liquors, salt or
 high-seasoned flesh, and in general from all
 food of difficult digestion.

8. After having repeated bleeding, as above
 specified, the pain is greatly abated, though it
 does not go quite off; but as soon as the strength
 returns, which bleeding had greatly impaired,
 the symptoms will vanish, and the patient re-
 cover perfectly, especially upon the approach
 of the following season of the year, which will
 be more conducive to recruit the strength, than
 that wherein he was first attacked with the dis-
 ease.

9. But though this or a similar method, sea- Mischiefs of
a contrary
method.
 sonably used in the beginning of the disease,
 does generally prove successful; yet it frequent-
 ly happens, when the patient hath been un-
 skilfully treated by a contrary procedure, he is

should be given in such quantities as prove gently laxative;
 for they tend to cool the habit, prevent any intestinal con-
 gestion, and abate febrile affections. Depending, therefore,
 upon glysters, and waiting eight days before a purgative is
 exhibited, is useless and unnecessary. *W.*

severely

Sect. 6. severely afflicted during life with flying pains, which are sometimes violent, and at others more gentle; whereby the unskilful are easily deceived, and they are commonly reckoned symptoms of the scurvy. And here by the way, to speak my sentiments freely, I shall add, that though I do not at all doubt that the *scurvy* is to be met with in these northern countries, yet I am persuaded it is not so frequent as is generally supposed to be; for most of those disorders we term *scorbutic*, are the effect of approaching ills, not yet formed into diseases, and not having hitherto assumed a certain form of appearance; or they are the remains of some disease imperfectly cured, whereby the blood and juices are vitiated. Thus, for instance, in those bodies wherein a matter suited to produce the gout is newly generated, but not yet thrown upon the joints, there appear various symptoms, which occasion us to suspect the *scurvy*, till the formation and actual appearance of the *gout* remove all doubt concerning the distemper.

The *scurvy*
less common
than it is
supposed
to be.

10. Neither are we ignorant that as many symptoms, resembling the *scurvy*, afflict gouty persons after the fit of the *gout* is over; namely, when an unseasonable use of evacuations, or the advanced age of the patient, or some other cause hath obstructed nature, so as to have rendered her unable to throw off all the gouty matter upon the joints; which being retained, and yet of no use, vitiates the mass of blood, and occasions many dangerous symptoms. And this is to be understood not only of the *gout*, but also of a beginning *dropsy*. Though it is proverbially said, *that where the scurvy ends the dropsy begins*; yet this maxim is only to be understood

derstood in this sense, that as soon as the *dropſy* Chap. 5. shews itself by manifest signs, the pre-conceived opinion of the *scurvy* falls to the ground. And the same may be maintained of several other chronic diseases, which are either yet growing in the body, and accordingly have not assumed any certain form of appearance; or of those which are partly conquered, but not totally cured. And in reality, unless this be granted, the name of the *scurvy* (as it does at this day) will obtain universally, and comprize most diseases. Whereas if we make an accurate search into the secret causes of every disease, and strip it of the disguise of these irregular symptoms which serve to conceal it, we shall soon discover its species, and easily reduce it to its proper class. Moreover, the method whereby these diseases are to be cured, must not be suited to those irregular symptoms, but to the individual disease, of whatever kind it be, as if it were perfectly formed, and actually existed.

II. But it is here to be observed, *that when* Frequent bleeding im- *the rheumatism hath taken deep root* * by a conti- proper in an inveterate nuance of some years, it is improper to repeat rheumatism bleeding

* *When the rheumatism has taken deep root, &c.* Dr. Swan says, in an obstinate rheumatism, accompanied with an impoverished state of blood, there is not a better remedy than the Peruvian bark, given between the fever and rheumatic fits, which frequently attack the patient towards evening: it has often cured when nothing else would.

Indeed where the pains are observed to intermit, and where at the onset of the disease sweatings have been profuse, the urine deposited a sediment, and the habit appears debilitated, Peruvian bark is a noble remedy: though Dr. CULLEN asserts, "he has seldom found it useful, and in some cases hurtful; yet that, I presume, has been owing to improper application; for he confesses it appears to him

Sect. 6. bleeding at such short intervals, as in the beginning of the disease; and better to interpose some weeks between every bleeding. By this means the morbid matter will either be quite expelled, or at least in so great a degree, that the remains of it may be carried off entirely by an issue made in one of the legs, and exhibiting a proper quantity of some volatile spirit every morning and evening in canary.

A scorbutic
rheumatism.

12. But though there is a remarkable difference between the true *rheumatism* and the *scurvy*, as intimated above, it must, nevertheless, be owned that there is another species of the *rheumatism*, which is near a-kin to the *scurvy*; for it resembles it in its capital symptoms, and requires nearly the same method of cure; and therefore I call it a *scorbutic rheumatism*.* The pain sometimes affects one, and sometimes another part, but it does rarely occasion a swelling,

to be fit, in those cases in which the phlogistic diathesis is much abated, and where, at the same time, the exacerbations of the disease are manifestly periodical, with considerable remissions interposed." But if the motory powers appear weak, and there should be any coldness, with a languid circulation, the volatile tincture of guaiacum will be found highly useful. W.

* A scorbutic rheumatism, &c. Hoffman also observes that there is a scorbutic rheumatism, in which the whole mass of the lymph and serum is vitiated with foul, excrementitious, sulphureous, saline, sharp particles, which occasionally manifest themselves by different kinds of eruptions; it proceeds from unwholesome, hard, salt diet, an idle and sedentary life, the common use of a heavy, vapid air, and long continued grief; and hence the inhabitants of sea ports are generally most subject to it.

Diluent and demulcent remedies taken freely, and continued a long time, are chiefly proper here: mineral waters drank with milk, along with a convenient regimen, are likewise of great efficacy in curing this species of the disease.

as in the other species, neither is it attended with a fever. It is also a less-fixed pain, and accompanied with irregular symptoms: sometimes it affects one limb, and sometimes another; sometimes it only attacks the internal parts, and causes sickness, which goes off again upon the return of the pain of the external parts. In this manner the patient is alternately afflicted, and the disease lasts a long time, like those distempers which are esteemed most chronic. It chiefly attacks the female sex, and men of weak constitutions; so that I should have concluded it ought to be referred to the tribe of hysteric disorders, had not repeated experience taught me that it would not yield at all to hysteric remedies. Chap. 5.

13. Such, likewise, as have gone through a long course of the *Peruvian bark* are subject to this disease, which, by the way, is the only ill effect I have ever observed from the use of this medicine. But however it be, this disease, whether it proceeds from this or any other cause, is easily conquered by the use of the following remedies, which I should have concealed had I not preferred the good of mankind to my private interest: for by the help of these alone, I have cured several who were afflicted in the manner I have described, when repeated *bleeding*, *cathartics*, a *milk diet*, the *testaceous powders*, &c. availed not at all.

Take of the conserve of garden scurvy grass, two ounces; conserve of wood sorrel, an ounce; compound powder of wake robin, six drams; syrup of oranges, enough to make the whole into an electuary; two drams of which is to

The scorbutic electuary.

Of the erysipelatous Fever.

Sect. 6.

be taken three times a day, for a month, drinking after it three ounces of the following distilled water :

The scorbutic water.

Take of garden scurvy grass, eight handfuls; of water cresses, brook lime, sage, and mint, each four handfuls; the peels of six oranges; nutmegs bruised, half an ounce: infuse them in six quarts of mum, and draw off only three quarts for use in a common still.

The dose of the compound powder of wake robin must by no means be diminished.

C H A P. VI.

Of the erysipelatous Fever.*

When the erysipelatous fever arises, and whom it chiefly affects.

1. **T**HIS disease affects every part of the body, but especially the face, and it happens at all times of the year, but chiefly at the close of summer, at which time it frequently

* *Erysipelatous Fever, &c.* This fever is arranged by Dr. CULLEN under the third order of febrile diseases, EXANTHEMATA, called ERYSIPELAS, which is defined,

An inflammatory fever of two or three days continuance, attended commonly with drowsiness, often with delirium; having in some part of the skin, but more frequently in the face, an erythematous inflammation. It is divided into two species; the first named,

ERYSIPELAS VESICULOSUM; attended with an erythema,* a spreading redness, occupying a large space, and running in some places into large blisters.

* A superficial tumour, solitary, diffused, having a rosy-coloured redness, vanishing on pressure, smooth, shining, unless made rough by eruptions, and attended with an acrid burning or itching heat, which verges not to suppuration, but to a spontaneous separation of the cuticle.—Sauvages.

Second,

quently attacks the patient whilst he is abroad. Chap. 6.

(1.) The face swells of a sudden, with great pain and redness, and (2.) abundance of small pimples appear, which, upon the increase of the inflammation, often rise up into small blisters, and spread considerably over the forehead and head, the eyes in the mean time being quite closed by the largeness of the tumour. The country people call it a *blast*, or *blight*; and in reality it differs little from those symptoms

Second, ERYSIPELAS PHLYCTENOIDES, accompanied with an erythema of many papulæ, occupying particularly parts of the trunk of the body, and immediately running into phlyctenæ, or small vesicles. — *Synopsis Nosologiæ Medicæ*, vol. ii.

The ERYTHEMA is also called by many authors ERYSIPELAS, but there seems to be a distinction necessary to be made here; which Dr. CULLEN has done very judiciously: When the disease is an affection of the skin alone, and very little of the whole system, or when the general affection of the system is only symptomatical of external inflammation, he calls the disease ERYTHEMAS; but when the external inflammation is an exanthema, and symptomatical of an affection of the whole system, he names it then ERYSIPELAS; and this distinction it is very necessary to observe, for though the cuticular appearances are similar in both cases, yet in one it forms the disease, and is *idiopathic*, in the other only *symptomatic*. But the ERYSIPELAS VESICULOSUM is the species which is here described by our author. And this is said to “arise from a matter generated in the body, and “which, analogous to the other cases of exanthemata, is, “in consequence of fever, thrown out upon the surface of “the body.” — Cullen’s *Practice of Physic*, vol. ii.

When the erysipelas is preceded and attended with only the common febrile symptoms, it is to be termed *febris erysipelatosâ benigna*; but when combined with unusual, and distressing complaints, such as total loss of strength, great sickness, oppression, and violent pains of other places than where the inflammation appears, then it may receive the term *erysipelatosâ maligna, seu pestilens*. — Macbride’s *Introduction*. — *W.*

Sect. 6. which accompany the wounds made by stings of bees, or wasps, excepting only that there are pustules. *And these are the signs of the common** and most remarkable species of the erysipelas.

2. But whatever part is affected by this disease, and at whatever time of the year it comes, a chilliness and shivering, unless they preceded a day or two before, as it sometimes happens, generally attend this inflammation, with a thirst, restlessness, and other signs of a fever. As the fever in the beginning occasioned the pain, swelling, and other symptoms (which increasing daily sometimes terminate in a gangrene) so in the course of the disease these symptoms greatly

* *And these are the signs of the common, &c.* To which, and the paragraph below, we may add; The hot stage is frequently attended with a confusion of the head, and some degree of delirium, and almost always with drowsiness, and perhaps a coma; the pulse is always frequent, and commonly full and hard; the blisters contain a thin, yellowish, and almost colourless liquor which sooner or later runs out; the surface of the skin in the blistered places sometimes become livid, and blackish; but this livor seldom goes deeper than the surface, or discovers any degree of gangrene affecting the skin; on the parts of the face not affected with blisters the cutis suffers, towards the end of the disease, a considerable desquamation. The inflammation usually continues for eight or ten days, and for the same time the fever and symptoms attending it also continue. In the progress of the complaint, the delirium and coma attending sometimes go on increasing, and the patient dies apoplectic, on the seventh, ninth, or eleventh day of the disease;—but if the fatal event does not take place, the inflammation after having affected a part, commonly the whole of the face, and perhaps the other external parts of the head, ceases; with the inflammation the fever also ceases; and without any evident crisis the patient returns to his ordinary state of health.—Cullen's *Practice of Physic*, vol. ii.—W.

conduce

conduce to the increase of the fever, till both
are taken off by proper remedies. Chap. 6.

3. *There is another species of this disease,** Another species of an erysipelas. though it happens less frequently. This attacks at any time of the year, and is mostly owing to too free an use of subtle attenuating

* *There is another species of this disease, &c.* Though considered here by our author as a species of erysipelas, it seems not to belong to this genus, as wanting the characteristic appearances; SAUVAGES, and after him, MACBRIDE, has arranged it under the genus FEBRIS SCARLATINA, and fixed it as a species of that disease; DR. CULLEN gives it as a GENUS under the EXANTHEMATA; and defines it,

An amphemerine fever; having on the second day spot-like appearances of a red colour, (*rubores maculosi*) resembling the stinging of nettles, which commonly disappears in the day time, and return with the fever at night; and after a few days run into extremely small scales; on which he makes the following remarks: There is a disease by the English called the nettle rash, which by some is considered as the urticariæ; but this disease, (nettle rash) as described by the learned Dr. HEBERDEN in the London Medical Transactions, and which we ourselves have often seen, is totally different from the urticaria of nosologists, inasmuch as it is a chronical disease unattended by fever, and may perhaps be capable of being referred to the order called IMPETIGINES; and farther declares, that the definition here given is rather consistent with the opinion of others, than his own; for he seldom has seen this disease, and never observed it to be epidemic, or preserving the regular course, as here described. — *Synopsis Nosologiæ Methodicæ*, vol. ii.

However it is a very mild disease, and scarce requires any medical assistance; all that will be necessary to be done in this case will be to keep the patient moderately warm, and to pursue the antiphlogistic method; but should the fever run uncommonly high we may have recourse to bleeding, gentle antimonials, and aperients; and should the head be so much affected as to bring on coma or convulsions, circumstances occurring in young children sometimes, in this as well as the simple scarlet fever, pediluvia and blistering will be requisite. *W.*

Sect. 6. } wines, or some similar spirituous liquor. It begins with a slight fever, which is immediately succeeded by an eruption of pustules almost over the whole body, resembling those occasioned by the stinging of nettles, and sometimes they rise up into blisters, and soon after disappear, and lie concealed under the skin, where they cause an intolerable itching, and after gentle scratching come out anew.

Its symptoms.

The erysipelous how to be treated.

4. *In order to the cure I conceive,** (1.) that the peccant matter which is mixed with the blood, must be evacuated in a proper manner; (2.) the ebullition of the blood checked by cooling remedies; and lastly, (3.) that the matter now secreted from the blood be invited out and discolled. To answer the ends, as soon as I am called, I direct a sufficient quantity of

** In order to the cure, I conceive, &c.* From considering the whole of the symptoms and the natural progress, it will appear obviously that the disease is in a great measure inflammatory, and should be treated nearly, if not altogether, in a similar manner with complaints of that class; but as here there is evidently an acrimonious humour discharged from the circulating fluids, and deposited in the cuticular vessels, from whence it ought to exude, and be eliminated from the habit, there requires great caution in the conduct of the fever; neither to render it too low by immoderate evacuations, nor by the imprudent application of repellent remedies endanger a retrocession, or hinder by the application of cold, or astringent materials, the free evacuation of the morbid matter.

Bleeding must be had recourse to, and repeated according to the urgency of the symptoms, and strength of the constitution; and purging, which last is considered by some almost as specific in this case; and the patient should be kept as much as possible in an erect posture, consistent with his ease: gentle diaphoretics should be persisted also in intermediately; and the whole of those remedies effectual in other inflammations. *W.*

blood

blood to be taken away from the arm, which Chap. 6.
generally resembles the blood of pleuritics. }

The next day I give my common purging potion, and exhibit a paregoric draught at bed time, in case it has operated briskly, *e. gr.* *syrup of white poppies*, in *cowslip flower water*, or something of the same kind. After purging, *I order the part affected to be fomented** with the following fomentation :

Take

* *I order the part affected to be fomented, &c.* Respecting the use of external applications, practitioners have been divided in that point; some prescribing lenient or softening epithems and fomentations to the parts; and other applications, such as were cooling, astringent, sedative; spirituous embrocations, oily, and watery applications; the three first of which are said to dispose to gangrene; the fourth, to increase inflammation; the two last to occasion its spreading; so that what is most commonly now employed, and esteemed the safest, is a dry, mealy powder, sprinkled upon the inflamed part.—Cullen's *Practice of Physic*, vol. ii.—Some application is, however, often necessary to relieve the anxiety of the patient's mind; in which case the unguentum sambuci may be used with the greatest safety; or rags dipped in the aqua lythargyri composita may be applied.

Dr. Swan recites a case of a violent and extensive erysipelas, which confirms the propriety of the mode of treatment above recommended from its quick and unexpected success. A middle-aged person, of a hot and bilious constitution, and somewhat inclined to corpulency, having for some time lost the use of his arm, from what cause I do not remember, was advised to apply a stimulating warm fomentation, and a warm nervous liniment thereto, in order to recover its motion. But soon after using these remedies, which availed not at all in relieving the complaint, an erysipelas arose in the part; and from thence gained one shoulder, and one side of the face, and afterwards extended all over one side of the neck and trunk, both before and behind. The parts effected were so exceeding tender and painful, as not to abide the most emollient and anodyne fomentation that could be contrived, and a high fever, with

Sect. 6.

The emol-
lient fodus.

Take of the roots of marshmallows and lilies, each two ounces; the leaves of mallows, elder, and mullein, of each two handfuls; the flowers of melilot, the tops of St. John's wort, and the lesser centaury, of each one handful; linseed and fenugreek seed, each half an ounce; boil them in water sufficient to leave three pints, strain off the liquor, and when it is used add two ounces of spirit of wine to every pint thereof. Let the part affected be fomented twice a day with soft flannels dipt in this fomentation hot, and wrung out, and, after fomenting, bathe it with the following mixture:

The mix-
ture.

Take of spirit of wine, half a pint; Venice treacle, two ounces; long pepper and cloves, reduced to powder, of each two drams; mix them together; cover the part affected with brown paper, moistened with this mixture.

The regi-
men.

5. Moreover, I order the patient to sup only barley broth, water gruel, and eat roast apples, to drink small beer, and to refrain from bed some hours every day. By this method the fever and other symptoms are generally soon taken off; if not, I repeat bleeding, and sometimes it is necessary to bleed a third time, interposing a day between each bleeding, that is, if the

great thirst and restlessness, accompanied the disorder; which however yielded, sooner than was expected, to repeated bleeding, gentle purging, diluting liquors drank freely, nitrous medicines, and emollient cataplasms, often renewed, made chiefly of *elder bark* boiled in *milk*, with the addition of a small quantity of *ointment of elder*.

It was hoped that the considerable inflammation, which happened here, would have roused the natural heat of the arm, and in some measure restored its former motion, but nevertheless it remained as motionless as ever. *W.*

blood

blood be greatly vitiated, and the fever high. Chap. 6. On the intermediate days of bleeding, I order a glyster made of *milk* and *syrup of violets*, and a cooling julap made of the *distilled water of water lilies*, &c. as delivered in the cure of the *rheumatism*, to be taken in a proper quantity every hour. *But a single bleeding, and a purge generally effect the cure,** provided they be used in time. The same method is to be used in that species attended with itching and redness, and resembling the stinging of nettles; only external applications are less necessary here.

6. I shall observe here, by the way, that though not only this disease, but the greater part of such as affect the skin, and are attended with some sort of eruption, in case they are of the chronic kind, readily yield to this method, Some other eruptive disorders require a different treatment.

* *But a single bleeding and a purge, &c.* Though this may sometimes succeed, the disease seldom yields so very quickly; and notwithstanding this method persisted in judiciously, will generally conquer the malady, still the swelling sometimes sinks, and the acrimonious humour appears to strike in. If under this circumstance oppression and anxiety come on, and the pulse grows weak, we must then apply blisters, and adhere to the use of cordials, and volatiles: but if on the contrary, notwithstanding the subsidence of the tumefaction, should the pulse and fever continue high, we must have recourse to bleeding, according to the exigencies of the case, and a purge be given, particularly if it affects the brain; blistering the lower extremities, and applying sinapisms to the feet should not be omitted. A gentleman, Dr. SWAN relates, had an erysipelas of the face struck in from the cold air, which was attended with all the symptoms of an inflamed brain, and from hence in most imminent danger, who appeared to be snatched from death by bleeding him in the jugular, and applying two large blisters to both sides of the neck, and besides these, bleeding in the arm, and giving him a strong purge; all which was done in the space of an hour. W.

and

} Sect. 6. and accordingly go off in a short time by repeated bleeding and purging; yet there are others that require a very different treatment. For neither the evacuations just mentioned, how frequently soever repeated, nor testaceous powders exhibited to sweeten the blood, at all avail when a noxious, recrementitious matter lies deep in the skin, and cannot be removed but by such remedies as strengthen the tone of the blood, and are consequently proper to open the obstructions of the pores: and therefore in the *violent itchings*, and inveterate eruptions of the skin, of that kind, I have had recourse to the following method with success:

The method described.

The sudorific bolus.

Take of Venice treacle, half a dram; electuary of the egg, a scruple; Virginian snake root, finely powdered, fifteen grains; oriental bezoar, five grains; syrup of candied citron, enough to make them into a bolus; which is to be taken every morning, and at bed time, for one and twenty days, drinking after it six spoonfuls of the following julap:

The cordial julap.

Take of the distilled water of carduus benedictus, six ounces; plague and treacle water, of each two ounces; syrup of cloves, an ounce: mix them together.

7. The patient should sweat an hour or two every morning after taking the medicine, or rather promote a gentle breathing sweat in bed, for the same space of time, by covering himself with a greater quantity of cloaths than usual. This course being over, if the eruption still continue, let the parts affected be anointed with the following liniment:

Take

Take of the ointment of sharp-pointed dock, two ounces; pomatum, an ounce; flowers of sulphur, three drams; oil of rhodium, half a scruple: mix them together for a liniment.

Chap. 6.

The cleansing liniment.

But the medicines above prescribed must by no means be used before sufficient bleeding and purging have been used; which, though they do not effect a cure used alone, are however preventive of a fever, which might otherwise arise from the use of such hot medicines.

To be preceded by bleeding and purging.

8. There is another kind of eruption,* though less frequent, wherein no evacuations avail.

An uncommon eruption and its cure described.

This,

* There is another kind of eruption, &c. This appears to be the *erysipelas phlyctenoides*, see pag. 403; called also, *zoster*, *zona*, *the shingles*. SAUVAGES gives the following description of this species:

It infests the trunk of the body, seizing sometimes the thorax, at others the scapula, and now and then the sides and ribs; it frequently arises lower, and surrounds the body like a girdle, in which case, if we believe PLINY, it is fatal; certain vesicles arise sometimes of a yellowish; but oftener rather of a livid colour, which are wont to corrode like a tetter, which species they greatly resemble; hence, by SCRIBONIUS LARGUS it is called HERPES; it is accompanied only by a slight fever, and if the vesicles should be repelled violent symptoms arise. In the cure two things are to be observed, first, that we should attempt to bring the small ulcers to maturation; secondly, we should avoid purging till the eruption shall have evacuated itself by the skin; but afterwards the patient must be purged with Glauber's salts, or sea water.—*Nosologia Methodica*, vol. i.

HOFFMAN in treating of the erysipelalous fever, vol. ii. sect. 1. cap. 13. gives an account of this species, of which he says: Amongst the peculiar kinds of erysipelas, that which PLINY calls ZOSTER, we ZONA, is known at this day to few, and little taken notice of by the ancients. It manifests itself by violent symptoms, and surrounds the body like a girdle, above the navel, from the region of the præcordia round the back, commonly of the breadth of some fingers;

Of the erysipelalous Fever.

Sect. 6. This, though it sometimes appears in other parts, generally affects the breast, and fixes itself in some certain place; it rises very little, if at all, higher than the skin, and appears like a broad spot, or a kind of branny scurf, of a yellowish colour. Whilst this spot keeps out, the patient continues pretty well, but when it vanishes, as it frequently does, a slight sickness succeeds, the urine becomes more turbid, and of a deeper red, but somewhat inclining to yellow. This disorder, after using general evacuations, is to be treated in the same manner as the *stubborn itch* above mentioned; only it must be remembered that the use of wine, and flesh of easy digestion, must by all means be indulged, all coolers being rather detrimental than serviceable. In this manner is this last kind of eruption cured; but sometimes it proves so inveterate, as only to yield to a long continued course of chalybeate waters.

fingers; the acrid pustules breaking out with most intense heat, burning like fire; but it is dangerous and sometimes fatal; that, though, is the most malignant of all, which appears after great languor in old men, highly cacochymic, and sometimes also in malignant and pestilential fevers, under the nipple of the breast, and in the region of the heart, or in the hands and other more exquisitely sensible parts; it soon becomes livid, at last black, and quickly terminates in death, which PLATERUS describes in the second volume of his works, pag. 23, under the name *Maculata*. He supplies one instance of its being cured in fourteen days by the use internally of mild diaphoretics for some time, and towards the conclusion by the external application of the oil of eggs. Two instances he gives from JOANNIS LANGII, *Epistolæ*, pag. 110; and thinks that the affection described by TULPIUS under the name of *exedens præcordiorum herpes* to be the same with this species of erysipelas. W.

*Of the Quinsy.**

1. **T**HIS disease comes at any time of the year, but especially between spring and summer; it chiefly attacks the young and When the quinsy happens, and whom it chiefly attacks. fan-guine,

* *The quinsy.* This disease is arranged by Dr. CULLEN under the class of febrile diseases; in the second order, INFLAMMATIONS, forming the tenth genus, named CYNANCHE, and divided into five species, four of which take their particular appellations from the parts of the throat and fauces affected, and the particular appearances there obvious; one from the appearances and fever accompanying the affection.—The GENUS he defines,

A febrile affection sometimes of the typhodal or nervous kind, attended with a pain and redness of the fauces, a difficulty of deglutition and respiration, with a sense of straitness in the fauces.

The first species is named,

CYNANCHE TONSILLARIS, wherein the mucous membrane of the fauces and tonsils are affected with redness and tumour, attended with an inflammatory fever.

The second, CYNANCHE MALIGNA, wherein the mucous membrane and fauces are affected with redness and tumour, and also with mucous spreading sloughs of a whitish or cineritious colour covering ulcers, accompanied with a typhodal or nervous fever, and cuticular eruptions.

The third, CYNANCHE TRACHEALIS, wherein respiration is difficult, a whizzing sound in inspiration, and the voice hoarse; there is also a clangous cough, little or no tumour appearing in the fauces, though deglutition is somewhat impeded, and inflammatory fever.

The fourth, CYNANCHE PHARYNGÆA; in this there appears a redness particularly in the lower part of the fauces; very difficult and most painful deglutition, a sufficiently easy respiration, and an inflammatory fever.

The fifth, CYNANCHE PAROTIDÆA, which is manifested by a large external tumour of the parotid and maxillary

Sect. 6. guine, and also red-haired persons. *It begins*
 (1.) *with a chilness and shivering,** (2.) a fever
 succeeds, and (3.) immediately after a pain
 and inflammation of the fauces, which, without
 speedy relief, hinder deglutition, and prevent
 breathing through the nose, whence suffocation
 is endangered from the inflammation and tumour
 of the *wvula*, *tonfillæ*, and *larynx*. *This disease is*
extremely dangerous,† and sometimes kills the pa-
 tient

lary glands; respiration and deglutition scarce at all disturbed, and most commonly a slight inflammatory fever.

The third species in Scotland is called the CROUP, the fifth the BRANKS; which last in England is named the MUMPS.

Quinseys are also symptomatic, and arise either from internal or external causes.—*Synopsis Nosologiæ Methodicæ*, vol. ii.

‡ The disease described by our author is that of the first species; to which we shall particularly advert. *W.*

* *It begins with a chilness and shivering, &c.* To which we may add, there is a pain sometimes shooting to the ear; with a troublesome clamminess of the mouth and throat, and a frequent but difficult excretion of mucus; this species is never contagious; it terminates generally by resolution, sometimes by suppuration, but hardly ever by gangrene, although in this disease some sloughy spots, commonly supposed to be forerunners of gangrene, sometimes appear upon the fauces: it is commonly occasioned by cold externally applied, particularly about the neck. And besides its commonly attacking the young and sanguine, as observed by SYDENHAM, there are others who have a disposition to it, acquired from habit; so that from any application of cold to any part of the body, this disease is easily induced. The inflammation and tumour are commonly at first most considerable in one tonsil, and afterwards, abating in that, increase in the other. *W.*

† *This disease is extremely dangerous, &c.* Simply considered, it is seldom attended with great danger, and when it does so happen, it is occasioned by the excessive tumefaction of the tonsils, or from the inflammation spreading to the glottis, larynx, and upper parts of the trachea,
 which

tient in a few hours, namely, when a large Chap. 7.
 quantity of febrile matter is thrown upon the
 above-mentioned parts, and the approaching
 violent symptoms are not timely enough pre-
 vented by proper remedies.

2. *In order to the cure I immediately bleed** plen- The curative
method de-
livered.
 tifully in the arm, and presently afterwards in the
 veins under the tongue; and then I order the
 inflamed parts to be besmeared with *honey of
 roses*, strongly acidulated with *spirit of sulphur*;
 and prescribe the following gargarism to be used

which is a rare occurrence, and producing such an obstruc-
 tion to the passage of the air as suffocates, and thereby pro-
 duces this fatal catastrophe; but in the last case, it then
 forms the *cynanche trachealis*. *W.*

* *In order to the cure I immediately bleed, &c.* The same
 method of treatment here is necessary as in other inflamma-
 tions; but after general depletion from bleeding in the
 arm, or the jugular vein; topical bleeding upon the ex-
 ternal fauces are extremely useful; stimulant applications,
 and blistering the neck; the vapour of warm water inhaled
 into the fauces; and mildly astringent gargles acidulated,
 as infusion of roses and the acidum vitriolicum dilutum,
 &c. but we must observe as cold is recommended in the an-
 tiphlogistic method in some inflammatory cases, here it must
 be avoided. At the onset of the disease emetics have, from
 experience, been proved to be extremely beneficial, but
 they are most safely and effectually administered after bleed-
 ing, and having promoted freely alvine evacuations; gentle
 diaphoretics may be given in order to produce sweating,
 as observation has evinced, that quinsies terminating by
 resolution are frequently attended by cuticular discharges;
 but should the inflammation run on so rapidly that not-
 withstanding these remedies, suppuration takes place, we
 must endeavour to assist the elimination of the matter formed
 as soon as possible; the steams of warm water received upon
 the internal parts of the fauces are thought productive of
 the greatest use, and contribute much to the spontaneous
 bursting of the abscess; but should it not so happen, the
 gland or glands affected must be opened, and the wounds
 healed. *W.*

not

Sect. 6. not in the common way, but to be held quietly in the mouth till it grows warm, and then spit out; and this to be repeated between whites.

The gargarism.

Take of the distilled waters of plantain, red roses, and frogs spawn, of each three ounces; three whites of eggs, beat to a liquor; white sugar, three drams: mix them together for a gargarism.

I also order the emulsions described in the cure of the pleurisy, or the like, to be taken daily.

3. I bleed again in the arm the next morning, unless the fever and difficulty of swallowing be in some measure abated, in which case I give a gentle purge: much experience having taught me that this is highly necessary and useful after bleeding. If this fever and other symptoms are like to be violent even after purging, which yet seldom happens, they are to be quieted by repeated bleeding, and applying a *large and strong blister to the back*.* During the whole course of the disease

* *Applying a large and strong blister to the back, &c.* The application of the blister to the throat, and externally over the parts affected, gives relief much sooner, and will often very quickly take off the inflammation.

With regard to the CYNANCHE TRACHEALIS and PHARYNGÆA, it is only necessary to observe, that as they attend parts, which from the violence of affection may be more immediately dangerous, and as they are like the *tonsillaris* of the truly inflammatory kind, the different methods made use of in that disease, and of those the most powerful must be employed, as soon as ever the symptoms declare the particular parts which give the specific terms to these complaints, are affected.

With regard to the CYNANCHE TRACHEALIS we should observe, that according to the accounts given of this disease by authors who have written on this subject, particularly Dr. HOME, it appears to be an inflammation of the
membrane

disease a cooling and emollient glyster must be given every morning, except on the purging day. Chap. 7.

4. I

membrane lining the upper part of the trachea, which, on dissection, is found to be covered over, and the passage for the air almost filled up with a thick slough, having a fibrous and membrane-like appearance, being the viscid remains of mucus thrown off by exudation from the inflamed parts. *A peculiar shrillness of voice, like the crowing of a cock, with a cough, but no sickness, nor at first much difficulty of breathing,* are its distinguishing signs.

The CYNANCHE PAROTIDÆA, besides the characteristic symptoms mentioned above, has the inflammation spreading from the parotid and maxillary glands, and affecting the muscles and ligaments which elevate and connect the lower with the upper jaw, occasioning severe pain in opening the mouth. Though the swelling is remarkably large, there is seldom any considerable degree of fever accompanying it. It seldom requires much medical assistance, and readily yields to warmth; bleeding once or twice, if necessary, purging, and rubbing the parts externally with linimentum volatile: there is, though, often a singular circumstance belonging to this disease; as the swelling recedes from the glands a tumour will sometimes affect the breasts in women and the testicles in men.

Dr. CULLEN says, these tumours are sometimes hard, large, and somewhat painful; but in this climate are seldom very painful, or of long continuance. The pyrexia attending this disease is commonly slight, and recedes with the swelling of the fauces; but sometimes, when the swelling of the testicles does not succeed to that of the fauces, or when one or the other has been suddenly repressed, the pyrexia becomes more considerable, is often attended with delirium, and has sometimes proved fatal. But upon the receding of the swellings of the testicles of the males, or of the breasts in females, the fever comes to be considerable, and threatens an affection of the brain, it will be proper by warm fomentations to bring back the swellings, and by vomiting, bleeding, and blistering to obviate the consequences of its absence. *W.*

The CYNANCHE MALIGNA.

MACBRIDE considers this as a variety of the *febris scarlatina*, and gives of it this short history—It begins its at-

Sect. 6.

4. I enjoin a total abstinence from flesh and broths made thereof, allowing only *barley broth*, *water gruel*, *roast apples*, and the like for diet; and

tack with chilnefs, languor, ficknefs, and vaft oppreffion; then fucceed exceffive heat, naufea, and vomiting, with a forenefs in the throat; the pulse is fmall and depressed, but extremely quick; the breathing frequent and laborious; the skin exceedingly hot, but not perfectly dry; the tongue moift, and efppecially towards the root, covered with a foft, whitifh mucus like cream; the tonfils enflamed and ulcerated, though not greatly fwelled: on the third day the efflorefcence appears, but brings no relief; on the contrary, the oppreffion, difficulty, and naufea increafe oftentimes with purging; and the patient, who by this time begins to grow delirious, is either constantly tolling in bed, or lies in a comatofe ftate; the ftrength, which has hitherto kept up more than might be expected, now entirely fails, the breathing becomes more laborious, and fwallowing more difficult; and before the fixth day life ends by fuffocation.

—*Introduction to the modern Praëctice and Theory of Phyfic.*

Dr. CULLEN fays, the progrefs of the difeafe depends upon the ftate of the fauces and of the pyrexia; when the ulcers on the fauces by their livid and black colour, by the fetor of the breath, and by many marks of acrimony in the fluids, and has a tendency to gangrene, this takes place to a confiderable degree, and the fymptoms of a putrid fever constantly increafing, the patient dies often on the third day, and fometimes later, but for the moft part before the feventh. The acrimony fometimes paffes through the whole courfe of the alimentary canal, propagating putrefaction, and often exhaufting the patient by frequent diarrhœa; or being poured out in the fauces, and again abforbed, frequently occafions large fwellings of the lymphatic glands about the neck, and fometimes to fuch a degree, as to occafion fuffocation. But thefe terminations do not always take place. Sometimes the ulcers of the fauces are of a milder nature, and the fever is more moderate, as well as of a lefs putrid kind; and when upon the appearance of the fkin the fever fuffers a remiffion; when the efflorefcence continues for three or four days, till it has fpread over the whole body, and then ends by a defquamation, giving a further remiffion of the fever; this often

entirely

and *ptisan* or *small beer* for drink. The patient must likewise sit up some hours every day; for the warmth of the bed increaseth the fever and

Chap. 7.

entirely terminates by gentle sweats on or before the seventh day, and the rest of the disease terminates in a few days more, by an excretion of the sloughs from the fauces, while sleep, appetite, and other marks of health return.—
Practice of Physic, vol. i.

This disease seems to have been considered by Dr. MACBRIDE only in a state of its greatest violence; for he says, the mixture of putrefaction and inflammation requiring such a contrariety of remedies, that little can be done for the patient's relief: bleeding and blistering, though they may procure some hours of ease from the oppression and difficulty of breathing, do no permanent service, and the former cannot be repeated; antimonials, even in their smallest doses, are apt to bring on violent purging; and the progress of the disease is too rapid even to expect much from the cortex, snake-root, or any other antiseptic.

Bleeding is very seldom useful; on the contrary, I have always found it invariably do much mischief, as it disposes so greatly to induce debility, and increase the putrescency of the humours; it never can be allowable but in the very beginning, and then only in very athletic and plethoric habits, for the alleviation of some oppressive inflammatory symptoms, and even then, in these cases, it contributes to hurry the patient on rapidly into the putrescent state; it should, therefore, ever be avoided, but when some symptom requires instantaneous relief. Antiseptics and local blistering are our only dependence after the exhibition of vomits, even from the beginning of the disease, and must be pursued through its whole course. When called in very early, I have repeatedly seen an antimonial emetic put a stop to the progress of the complaint. In this manner should we begin our cure; for the vomit not only evacuates the stomach, but generally produces two or three alvine evacuations, and brings on a gentle diaphoresis, which should be supported by mild doses of antimonials, using at the same time antiseptic gargles, such as infusion of roses, with tincture of myrrh, decoction of bark, &c. But should there not arise certain signs of the disease being conquered by these means on the second or third day, we must have recourse to the cortex given in substance, and thrown in as

Sect. 6. and its concomitants, which I endeavour to conquer by this method. It is well worth observing that the *quinsey*, which is only a symptom of a *stationary fever*, must be treated with the same method which the fever demands, and accordingly, is either to be carried off by perspiration and sweat, or some other method, which the original fever whereon it depends, requires.

5. There are other fevers which ought to be enumerated amongst the *intercurrents*, which, by reason of their terminating immediately some other way, in some peculiar symptoms, are not usually accounted fevers; though they were originally such. And the disorder, whence the disease takes its name, is only the symptom of the fever, which terminates at length therein. At present I shall only briefly treat of two of these, namely, *a bleeding at the nose* * and spitting of blood.

6. A

freely as the constitution will bear it; or it may be given by mixing the extract, powder, and tincture, in a decoction of bark, in proper proportions, as more may be given in this form than any other. Sometimes, though all these forms are apt to disagree with some stomachs, under this circumstance I have known the cold infusion answer every purpose, and its disagreeable effects avoided; but should this prove equally offensive, other medicines of the antiseptic class must be tried, for it is from them alone we can expect to derive any advantage. W.

* *A bleeding at the nose, &c.* SYDENHAM considers this as critical, and therefore merely symptomatic, arising by anastomosis, from the relaxation of the small vessels pouring out their contents, consequently salutary, not attended with any danger, or likely to be productive of mischief, but from the length of its duration. HOFFMAN says, hæmorrhages of the nose are also critical, and salutary very often, which in an inflammatory fever break out on a non-critical day,
between

6. *A bleeding at the nose* happens at any time of the year, and chiefly afflicts such as are of a hot and weakly constitution, and more frequently in the decline of life, than in youth. Some signs of a fever appear in the beginning, which go off suddenly, making way for itself through the nostrils; but there remains a pain and heat of the fore part of the head. The blood flows for some hours, and then stops awhile, and soon after breaks out anew; and this it does alternately, till at length the hæmorrhage ceases entirely, being stopped either by the use of remedies, or ceasing spontaneously from the considerable loss of blood; but there is danger of a relapse every year, if the blood happens to be much heated by spirituous liquors, or any other way.

Chap. 7.

A bleeding at the nose, and its symptoms, described.

7. In this case I endeavour to check the excessive heat and ebullition of the blood, whence the preternatural extravasation proceeds, and to divert the force of it another way. For this purpose I bleed frequently and copiously in the arm, the blood always appearing like that taken away in a pleurisy; I order a cooling and in-craftating diet; as *milk* boiled with thrice its

How to be treated.

between the third and fourth, or even on a critical day, the seventh, and terminate here fevers arising most commonly from plethora. Vol. ii. sect. 1. cap. 1. §. 18. *De Hæmorrhagiis Narium.*

This hæmorrhage may generally be left to nature; but should it continue, or be so profuse, that it debilitates the constitution too greatly, it then calls for medical assistance. This affection may be considered in two points of view, *active* and *passive*; the first, when it depends on the too powerful action of the system, in which case bleeding, cooling regimen, and sedatives are proper; the second, when its cause is a local relaxation of the sanguinary vessels, then strengtheners, astringents, and antiseptics are required.

W.

Sect. 6. quantity of water, to be drank cold, *roast apples*, *barley broth*, and other *spoon meats* made without flesh, and likewise cooling and incrassating juleps, with emulsions, as above prescribed in inflammatory diseases. I advise the patient to refrain from bed some hours every day, and not to omit taking a lenitive and cooling glyster every day also; and an opiate may be exhibited every evening at bed time, in order to check the commotion of the blood. But as hæmorrhages of this kind are frequently accompanied with an acrimonious lymph, which being mixed with the blood, increases its motion, and opens the mouths of the vessels; besides revulsions and cooling, I usually give a gentle purge, even in the height of the disease, and an opiate in a larger dose than ordinary after the operation is over, and when the symptom is entirely gone off, I give another purge.

8. As to external applications, a linen compress, dipt in a solution of *sal prunella* in cold water, and gently squeezed out, may be applied to the nape and both sides of the neck, often in a day. And after general evacuations, the following liquor may be used: *

Take

* *The following liquor may be used.* The following form of the Edinburgh dispensatory is a much more judicious composition:

Take blue vitriol and alum, of each half a pound; water, two quarts; boil till all the salts are dissolved, then filtre the liquor, and to every pint of it add a dram of the oil of vitriol.

But the following method is more effectual: "Take a piece
" of strong sewing silk, wax it well, and to one end of it
" fasten a dossil of lint; then take a piece of catgut (about
" the size of a second string of a violin) and introduce it
" up

Take of Hungarian vitriol and alum, each an ounce; the phlegm of vitriol, half a pint; boil them together till the salts are dissolved; filtre the liquor, when it is cold, and separate it from the crystals which shoot between whites; lastly, to the remaining liquor add a twelfth part of oil of vitriol. Put up a tent dipt in this liquor into the nostril whence the blood flows, and keep it therein two days. Chap. 7.
A styptic liquor.

Linen compresses dipt in this liquor, and applied to the part, will stop an external bleeding. *

9. A spitting of blood, which seizes weak persons of a hot constitution and disordered lungs, and young persons rather than old, between spring and summer, nearly approaches the nature of the hæmorrhage just treated; this being a fever likewise, that loses its name and essence by the *crisis*, whereby it is terminated, with this

A spitting of blood described, and its cure.

“ up the bleeding nostril, when you perceive it in the
 “ mouth, take hold of its end with a forceps, and draw it
 “ outwards, make a knot upon it, and fasten the end of
 “ the waxed silk to it; then withdraw the catgut back
 “ again by the nostril; take hold of the silk, and pull the
 “ dossil of lint into the posterior nostril, after which stuff
 “ the anterior nostril full of lint, and thus you certainly
 “ stop the bleeding. After a few days the lint may be
 “ taken away.”—See *Motherby's Dictionary*, article *Hæmorrhagia*.—*W.*

* Will stop any external bleeding, &c. It is somewhat strange, that our author should so positively assert that his styptic will stop any external bleeding. Few good surgeons ever make use of any other styptic than dry lint, and all are trifling, when by a wound of the external parts an artery of any considerable size is divided; for then recourse must be had to the needle and thread, which infallibly secures it. All styptics except dry lint, though too commonly used in the country, are prejudicial to a wound.

Sect. 6. difference only, that in a *bleeding at the nose* the blood, being too much agitated, flows impetuously to the veins of the nostrils, whereas in this hæmorrhage it hurries to the lungs. And as in the former disorder a pain and heat in the fore part of the head continue to afflict the patient during the flux of the blood, so in this the breast is affected with pain, heat, and weakness. This disorder also requires almost the same treatment, only it will not bear purgation, which, especially if it be repeated, endangers a consumption. But frequent bleeding, a glyster injected every day, and *diacodium* taken every evening, along with a cooling and incrassating regimen, and medicines, *will effect a cure.**

10. And

* *Will effect a cure, &c.* SYDENHAM considers this in the same point of view as the former, which will require the same mode of treatment, except the local applications, which cannot for obvious reasons be had recourse to; but in this case the blood is coughed up (and that most easily) from the lungs, and the blood is taken away from the arm, is greatly enflamed, in proportion to which, and other symptoms, bleeding must be repeated. This disorder requires the loss of a considerable quantity of blood, a strict, low diet, diluents, nitre, in fine, a close perseverance in the antiphlogistic regimen, for want of which, particularly large bleedings, it not unfrequently terminates in consumption: though we must here observe, that when hæmorrhages happen from a putrescent acrimony of the fluids, as they sometimes do in putrid fevers, our chief dependance must be on antiseptics; bleeding here would be injudicious, and extremely prejudicial.

In cases of hæmorrhage, the use of saturnine united with opiates have been recommended in the third volume of the London Medical Transactions by Dr. Reynolds, in the following form:

℞. Cerussæ acetatæ Ph. Lond. novæ, gr. j.
 Conservæ rosæ rubræ, gr. iv.

Tinc.

10. And these are the particulars I have hitherto observed, concerning that numerous tribe of diseases, which is divided into different species, and comprehended under the generical name of *fevers*, and of the symptoms thereon depending; in which I have solicitously endeavoured not to intrude my own inventions and imaginations on the world, but with a candid and honest mind (and consequently attached to no hypothesis) have given the history of the diseases themselves, and their natural concomitants, and subjoined the method of cure with equal caution and truth. And if an earnest desire of discovering and establishing a more certain method of curing diseases has led me to strike out a new road, it is hoped that none of the learned will accuse me, either of contemning their judgement, and trusting too much to my own, or a love of novelty; since the success which has attended my inquiries, has hitherto much encouraged me, and the experience of

Chap. 7.

The observations hitherto delivered quite practical.

Tincturæ opii P. L. novæ, gut. iij.

F. pilulæ sextis horis sumendæ.

The cerussa may be occasionally increased to one grain and a half, and which he has given with success; nor have they been attended with those evil consequences, which have been attributed to them by Sir George Baker and others. I must confess I have seen them extremely beneficial, united with opiates, in similar cases, as well as the colliquative diarrhœa in phthical patients; but have always interposed occasionally gentle laxatives: the saturnine preparation I have generally made use of, was the aqua lythargyri acetati from two to five or six drops every eight hours, joined with tinctura opii; and I must confess I have always found them useful, often efficacious; nor have I ever perceived those disagreeable consequences attending their exhibition, as represented by some authors, who have written so strongly against their being administered. *W.*

my

Sect. 6. my successors will undoubtedly vouch for my veracity and honesty.

Fievers de-
stroy two
thirds of
mankind.

11. In reality, this destructive tribe of diseases which afflicts mankind daily, and destroys at least two thirds of the human species, excepting such as die of a violent death, is not to be opposed in an indolent manner. The continued violence of these distempers, and the daily destruction of robust and young persons especially, notwithstanding all the helps which the specious methods, so confidently delivered by theoretical authors, have hitherto afforded, gave me little satisfaction when I first considered the matters; for I clearly perceived that those trifling disquisitions were so little conducive to the cure of diseases, that such as had recourse to these refuges were not more safe, notwithstanding the pretensions of their dogmatic authors, than such as neglected the assistance of art, and trusted wholly to nature.

12. If therefore I have contributed in some measure to lessen the difficulty and danger that frequently occur in the cure of these diseases (as without breach of modesty I may presume I have) I have gained my end in part, and enjoy the pleasing reward of my labours, well spent in promoting the good of mankind. These are nearly all the principal discoveries I have hitherto made, or at least all those that I could reduce to any method, with relation to fevers, and the symptoms thereon depending, to the thirtieth of *December*, 1675, when I finished these essays.

An EPISTLE of ROBERT BRADY, M. D.
 Master of Caius College, Cambridge, and Re-
 gius Professor of Physic there, to Dr. SYDEN-
 HAM.

Learned Sir,

NO physician but yourself has hitherto atten-
 tively considered the force of the air, and its
 influence on the human body, the manner of its
 acting in preserving life, the great share it has in
 the fermentation, alteration, and circulation of the
 blood, and in performing animal motion. Nei-
 ther have physicians or naturalists ever searched
 diligently and accurately into its natural tempe-
 rature and manifold changes; which *constitutions*
 you have judiciously delineated.*

In reality, as the air insinuates itself into all,
 even the remotest parts of the body, it must
 needs communicate the changes it undergoes
 from the substances wherewith it is impregnated
 to the blood and juices; and hence any particu-
 lar depravity of the blood generally arises from
 some certain ill constitution of the air. You
 have, therefore, wisely formed your medicinal
 observations of the history and cure of *acute dis-*

* However truly this might be then said of our author,
 yet since his time the ingenious Dr. *Arbutnot* has given
 us a valuable treatise on air; and *Boerhaave* and *Hoffman*
 have treated largely of it, both philosophically and medi-
 cally; *Bernerus*, another learned foreign physician, has
 wrote a judicious essay on it, entitled, *Exercitatio de usu*
Aeris mechanico in corpore humano, printed at Amsterdam in
 1723; and Dr. *Huxham*, *de Aere & Morbis epidemicis*; to
 which we refer our readers for abundant satisfaction on this
 interesting subject.

eases,

eases agreeably to the various *constitutions* of years and their seasons; for the impressions of the air upon the blood and juices, and especially upon the spirits, which perhaps are formed of air, are manifest in these; and I am persuaded that the nature of fevers, as deduced from observing the temperature of the air in those years wherein they prevailed, constitutes the most useful, if not the only method of establishing a sure basis for practice. Let me intreat you, therefore, if you have any observations relating to the fevers of the immediately preceding years, to publish them, by which means you will highly promote the good of mankind.

In *Sect. I. Chap. V.* of your work, you have briefly treated of the use and manner of giving the bark. I know some eminent physicians, who give it in a large quantity, and repeat it frequently; and others who prepare extracts and infusions of it, and make the infusions into emulsions, julaps, &c. affirming that by these means they can certainly cure intermittents, and likewise some continued fevers. It is doubtless an excellent remedy in intermittents, and I have used it twenty years successfully in a variety of forms and preparations. If, however, you have experienced any particular or better method of giving it, pray publish it.

In the cure of the rheumatism you have proposed frequent and copious bleeding as necessary; * I should be glad to know if it will not yield with equal certainty to some gentler method. But whilst you employ your time in these studies, you will be grievously censured and

* See *Sect. vi. Chap. v. par. 4.*

calumniated by envious and malicious men, who will no more spare your name and reputation on this occasion, than they did formerly, though by using you so ill they incur the displeasure of the candid and ingenuous part of mankind, who generally treat such slanderers with contempt.

And, in reality, if they would be acquainted with a history of fevers, their essences, causes, differences, and true method of cure, derived from a long course of experience, they must necessarily follow you as their guide, as there is scarce any other way of coming at this knowledge, except that which you have discovered.

Be not deterred, therefore, from pursuing your inquiries; despise the raillery of the superficially learned, and assist the candid part of mankind: you have pointed out the way, and if your endeavours displease, it lies upon those, who censure them, to shew us a better.

I take my leave, worthy Sir, with assuring you that your compliance with my request will oblige the whole faculty, and, amongst the rest,

Your most obliged Friend,

Cambridge,
Dec. 30, 1679.

R. BRADY.

Dr.

Dr. SYDENHAM's Answer to Dr. BRADY ; containing the History of the epidemic Diseases from the Year 1675 to 1680.

Dear Sir,

The author's
modesty.

1. **I**F I have in the least contributed by my observations to improve the methods of cure in diseases, it doubtless becomes me in particular to communicate them, more freely than other men, to those who desire it; for as I am satisfied that my knowledge does not exceed that of others, it can do me no prejudice to publish such trite and inconsiderable remarks. If, therefore, I have made any beneficial discoveries in physic, and better ascertained the methods of cure in distempers, the imparting them does not entitle me to the same praise, as it would do others who can easily imagine the vast satisfaction it would afford me, who have had the gout these thirty years, and been a long time severely afflicted with the stone, to be informed of a method that would give me relief.

The duty of
eminent
men.

2. But few persons are endowed by Almighty God with such qualifications, as may make them serviceable to mankind in this case, and it can only be successfully accomplished by those whose abilities are superior to mine. Nevertheless I have always thought it a greater happiness to discover a certain method of curing, even the slightest disease, than to accumulate the largest fortune: and whoever compasses the former, I esteem not only happier, but better and wiser too. For can a person give a stronger proof of his benevolence and wisdom, than by
endea-

endeavouring always to promote the public good, rather than his private interest, as he makes so small and inconsiderable a part of the whole? For to use the expression of *Cicero*, that great master of thought and diction, and genius of his age, I may say of mankind; *As the laws prefer the good of the whole to that of particulars, so a wise and good man, who knows his duty and obeys the laws, consults the good of mankind more than his own or any single person's.** And in reality, as it is the part of a wicked man to destroy his fellow-creatures, so it is the duty of a good man to preserve them, and instruct others how to save them from death, even after his own decease. Nor can any thing be more inhuman and detestable, than to insinuate a disregard and unconcern for whatever misfortunes may happen to mankind after our death.

3. But, not to insist upon these particulars at present, I must own, I think myself obliged to communicate to you the discoveries I have made relating to the diseases you inquire after, however trifling they seem. I must likewise return you thanks for the resentment you are pleased to express of the ill treatment I have received from some persons, whose censure I should have escaped, if the blameless conduct of a person who has injured no man in words or actions, could have secured me. But since this has been occasioned by no fault of mine, nor I hope ever will, I am determined to give myself little concern for the failings of others, being convinced that all that is incumbent on me, is to act like an honest man, and discharge the office of a good physician to the best of my ability.

The author
complains of
injurious
treatment.

* *Cic. de fin. bon. & mal.*

Epidemics to
be first treat-
ed of, and
in what
manner.

4. I will therefore deliver the observations I have made concerning the diseases you inquire after in your letter. And, first, I will treat of the present epidemic intermittents; in doing which I conceive it may be proper to run through those years methodically, but briefly, which succeeded that wherein I conclude my history of the *acute diseases*, which had prevailed for fifteen years preceding, and just to recapitulate some particulars relating to their cure that have already been taken notice of. By this means we shall more clearly perceive at what time, and by what degrees, the present reigning constitution of fevers crept in.

The diseases
of 1676 the
same with
those of the
three former
years.

5. The year 1676 gave rise to the same tribe of diseases as were generated by the constitution last mentioned, in our observations above delivered, *viz.* those of 1673, (in the autumn whereof it first began) 1674, and 1675. But this constitution being in its decline, the diseases that appeared were milder than ordinary, and not so epidemic, notwithstanding the peculiar disposition of this year with respect to the manifest qualities of the air, in which it differed considerably from the preceding years; for the heat of the summer, and the cold of the winter, were much greater than in most years within my remembrance. And yet, as so great a dissimilitude of seasons gave rise to similar diseases, it is plain from hence, that *the secret temperature of the air* * favours their production *more than its manifest qualities*. But it must be owned that the
same

* *The secret temperature of the air, &c.* Perhaps our author ascribes too much, here and elsewhere, to the *secret temperature of the air*, which, probably, has a great share

same diseases, with respect to some certain symptoms, depend sometimes on the manifest disposition of the air as appears from the *measles* and *cholera morbus* of this year, of which I shall briefly treat.

6. Thus the *measles* that appeared in the beginning of the year, though they were not very epidemic, were remarkable for their longer duration; for whereas they began as usual in *January*, increased till the vernal equinox, and then abating gradually, almost went off at the summer solstice; they continued this year till near the autumnal equinox, occasioned perhaps by the summer's heat; whence they gained force, so as to last longer; yet nevertheless they required no new method of cure.

The *measles* lasted long this year.

7. At the close of summer the *cholera morbus* raged epidemically, and being rendered more severe by the extraordinary heat of the seasons, was accompanied with more violent and invete-

A very violent *cholera morbus* raged at the close of summer.

share in the production of contagious diseases; but how it influences those of another species, has not hitherto plainly appeared; whereas, on the contrary, the *manifest* or *sensible qualities of the air*, such as its heat, cold, dryness, moisture, &c. have evidently a considerable power over epidemic diseases, the symptoms whereof seem to take their rise, suffer great variations, and are satisfactorily accounted for from the preceding, or the then reigning manifest disposition of the air, or both jointly. The different seasons of the year, the variation of the winds, the situation of places, the nature of the waters, and the manner of living of the inhabitants, are also to be considered in this view, as these eminently contribute to the rise and course of epidemic diseases. For proof of this the reader may consult Dr. WINTRINGHAM's *Commentarium Nosolog.* HUXHAM *de Aere & Morb. epidem.* HILLARY's *Account of the principal Variations of the Weather, and the concomitant epidemic Diseases at RIPPON, &c. during the space of eight years, which is added to the second edition of his Essay on the SMALL POX.* RAMAZZINI *Constitut. epidem. Mutinens.* HOFFMAN. *Med. rat. Syst.* &c.

rate convulsions, than I had hitherto observed. For not only the *abdomen* (which is usually in this case) but all the muscles of the body, and especially those of the arms and legs, were affected with terrible spasms, so that the patient would sometimes leap out of bed, and writhe himself all manner of ways, in order, if possible, to mitigate their violence.

It required
stronger opi-
ates than or-
dinary.
Exemplified
in a case.

8. But though this disease admitted of the usual method of cure, yet stronger *opiates*, and a frequent repetition of them than ordinary, were manifestly indicated. To exemplify this observation: I was called to a person at this time, who was reduced to the last extremity by the above-mentioned symptom, attended with excessive vomiting, cold sweats, and a scarce perceptible pulse: Dr. *Goodal* accompanied me (whose name I can never mention, without calling to mind his probity and candour, his indefatigable endeavours to discover and cure diseases, and his friendship for me; I gave the patient twenty-five drops of my *liquid laudanum* in a spoonful of *strong cinnamon water*, for as there was a very great inclination to vomit, I was apprehensive that a larger quantity of the vehicle might occasion the medicine to be vomited up, as it often happens in such cases. I waited near half an hour, and finding the medicine too weak to stop the vomiting, and take off the convulsions, I was obliged to repeat it, and increase the dose proportionably, till these obstinate symptoms were at length quieted; observing however to give it at such intervals, that I might be able to conjecture what effect the last dose would have, before I exhibited another. The convulsions, notwithstanding, being apt to return

return upon the least motion, I strictly enjoined that the patient should be kept very still for a few days, and take the above-mentioned medicine between whiles in a smaller quantity, even after his recovery, in order to prevent a relapse: and this method had the desired success.

9. Nor ought I to be accounted too bold for exhibiting *laudanum* so plentifully, since experience will clearly shew, that in disorders where opiates are indicated, *viz. violent pain, and vomiting*, or an immoderate *looseness* and great hurry of the spirits, the dose of the medicine, and its repetition in point of frequency, must be proportioned to the urgency of the symptom. For such a dose as may conquer a slight symptom, will be rendered ineffectual by a more violent one; and what would otherwise endanger life, will in such a case be a means of preserving it.

The author's reasons for giving *laudanum* copiously.

10. These are the diseases that prevailed this year, being the same, as I have already intimated, with those of the three preceding years. But I can give no account of those that raged in the following year, *viz. in 1677*. For at the beginning of it I made bloody urine upon the least motion, and was soon after attacked with the gout, which did not affect my limbs so much as my bowels, where I had violent pain; and these disorders were succeeded with a decay of strength, a loss of appetite, a swelling of the legs, and other dangerous symptoms; so that death would then have been welcome to me. My ill state of health at this time confined me within doors for three months, and afterwards obliged me to go into the country for my recovery, and make almost as long a stay there. I came back to town in autumn, when my friends informed me, that

Prevented by sickness from observing the diseases of 1677.

there still remained a few intermittents here and there, most of which had first seized the patients in the country; but having been prevented from attending the sick by my own indisposition, I can give no account of the diseases of this year.

Intermittents
arose, and
became epi-
demic in
1678.

11. The constitution of the following year, namely of 1678, being entirely changed, so eminently favoured *intermittents*, that they again became epidemic, whereas from 1664 to this time, including the space of thirteen years, they were in a manner extinct in town, except only that they seized a few *sporadically*, or were by accident brought with them out of the country. And they will not continue in this state, but will spread much more, till this constitution of the air whence they proceed comes to its height. For though only a few of these *intermittents* arose in the spring, yet they prevailed so much over all other diseases at the decline of summer and beginning of autumn, as to be the sole epidemic diseases. But in the winter they yielded by degrees to the *small pox*, and the other reigning epidemics, till the return of the season peculiar to them.

Tertians and
quotidians
most fre-
quent.

12. To proceed now to deliver what we have learnt by diligent observation, relating to the nature and causes of these fevers. First then it is to be noted, that though *quartans* were more frequent formerly, yet now *tertians* or *quotidians* were most common, unless the latter be entitled *double tertians*; and likewise, that though these *tertians* sometimes began with chills and shivering, which were succeeded first by heat, and soon after by sweat, and ended at length in a perfect intermission, returning again after a fixed time,

time, yet they did not keep this order after the third or fourth fit, especially if the patient was confined to his bed, and used hot cardiacs, which increase the disease. But afterwards this fever became so unusually violent, that only a *remission* happened in place of an *intermission*; and approaching every day nearer to the species of continued fevers, it seized the head, and proved fatal to abundance of persons.

13. As to the cure, I have learnt by many years experience, that it is dangerous to attempt to remove *tertians* and *quotidians* by *sudorifics*, especially when they are recent, and have assumed no certain shape; for they then nearly approach to continued fevers. And though it is well known that as soon as the sweat breaks out, the restlessness and other symptoms presently go off, and a perfect intermission succeeds, and consequently that it should be somewhat promoted, or at least not hindered, when the fit is going off, yet it is manifest that if sweat be forced beyond the due degree, the intermittent becomes a continued fever, and life is endangered. I conceive the reason of this to be, that so profuse a sweat (since it exceeds the quantity of the febrile matter, already so attenuated by the heat of the fit, that it may now be expelled by despumation) after it has carried off such a part thereof, as is sufficient to produce a single fit, wastes the rest in inflaming the blood. Upon considering, therefore, the inefficacy of this method, and the inconveniences attending other evacuations, as bleeding and purging, both which, by weakening the texture of the blood, prolong the disease, the *Peruvian* bark afforded me the surest hope; of

Dangerous
to attempt
their cure by
sudorifics.

which I can truly say, notwithstanding the prejudice of the vulgar and a few of the learned, that I never found, or could reasonably suspect, any ill consequence follow its use; unless that such as have taken it a long time are sometimes seized with a *scorbutic rheumatism*, as I have before remarked in treating of the *Rheumatism*. *But this disorder seldom proceeds from this cause,** and, when it does, readily yields to the remedies there prescribed.

The bark not only good in intermittents.

14. And, in reality, if I were as certain of the continuance of its effects, as I am of the innocence of the *bark*, I should not scruple to prefer it to all the medicines hitherto known; since it is not only excellent in this disease, but likewise in those of the *uterus* and stomach: so little reason is there to complain of its unwholesomeness.

Why it has been exclaimed against.

15. But I conceive the bark has been condemned, chiefly, for the following reasons: (1.) Because the many terrible symptoms, which accompany intermittents of a long standing, where not a grain of the bark has been given, are im-

* *But this disorder seldom proceeds from this cause, &c.* Our author in a former part of his work, sect. 6th, chap. 5th, par. 13, attributes as the cause of the scorbutic rheumatism, a long course of Peruvian bark: I have not found such ill effects mentioned by any other author, whose works have fallen into my hands; but on the contrary we have had many instances of the rheumatism, where attended with a relaxed state of the solids, and an acrimony of the fluids, cured by this medicine: nor do we find the action of arum, a medicine Sydenham depends upon for curing the rheumatism, very dissimilar to that of bark, as they both are ranked amongst the class of stimulants, stimulate the stomach, promote perspiration and digestion, and increase the action of the serous fluids, upon which, probably, the cure of rheumatic affections in a great measure depends. *W.*

mediately

mediately ascribed to it, upon taking but a single dose of it. (2.) *Because it cures the disease by a secret virtue,** and not by any sensible evacuation, many persons conclude that the morbid matter, which ought to have been expelled, is retained in the body by its astringency, and ready to occasion fresh disturbance, the disease not being entirely carried off. But such persons do not sufficiently consider, that the sweats happening at the decline of the fit have expelled all the morbid matter that was collected on the well days, so that only the seeds of the disease remain, to be ripened in time; and that the *bark*, by closely pursuing the retiring fit, and cutting off the supplies of the illness, cannot be a means of retaining the morbid matter in the blood, which is now existent

* *Because it cures the disease by a secret virtue, &c.* With regard to the specific power of medicine, see our Note on specifics in the author's preface. On considering the admitted action of bark we shall be led to a different mode of reasoning on this subject, and say, that from increasing insensible perspiration, and the tone of the system, it not only prevents a collection of morbid matter, but suffers it to pass through the habit without producing its effects, by rendering the constitution incapable of feeling the power of miasmatic action; and hence it is that intermittents are prevented from returning, which they are apt to do, if the patient immediately desists from the use of bark, on the first appearance of the disease being conquered; for in order to hinder a return of the paroxysms, it is adviseable to continue the medicine for three or four days regularly after the cure appears to be established; then omit it for a few days, and return to it again; then again leave off its application for a week, or ten days, and have again recourse to it; and so go on for a longer or shorter space, as may appear requisite for the total re-establishment of former health. By this means time will be allowed for the free exit of the remains of the morbid matter, which otherwise, if suffered to continue in the habit in the smallest proportion, would recall the febrile accessions afresh. *W.*

there only in *embryo*; and consequently is not to be esteemed productive of those fits and obstructions which are commonly judged to proceed from its use.

It does not appear to cure by its astringency.

16. But how does it appear that the *bark* cures *intermittents* by its astringency? In order to prove this, other astringents, possessed of the same virtue, must first necessarily be produced; I have tried the strongest ineffectually. Besides, *the bark cures even where it purges*,* which is sometimes the case. Upon the whole, therefore, they act the wisest part, who confine their inquiries to their abilities. But if any body will delude himself, and imagine that he is possessed of other faculties than such as either help him to understand natural religion, which teaches that God, the creator and governor of all things, is to be worshipped with profound veneration, as he justly merits; or moral philosophy, that he may practice virtue, and make himself an useful member of society; or, lastly, the medical, ma-

* *The bark cures even where it purges, &c.* Under some particular circumstances it is necessary even to join purgatives with bark, where obstructions in the abdominal viscera, and a striction of the alimentary canal are prevalent: and perhaps it is on this account that the purgative effects of bark adds sometimes to its salutary power. But when these are removed this effect will frustrate our intention: for it is found that every debilitating power applied to the body, such as evacuations, cooling medicines, &c. favour the return of intermittents; hence, then, the evacuation produced, either by bark itself, or other substances, does more than compensate by its weakening effects, the power of the bark in strengthening the tone of the fibres; sometimes, however, effects may be mixed, and bark answers where a purging ensues. Here, although the chief operation of the bark be on the stomach, yet a part of it may be carried into the blood, and obviate, compensate, or overpower the effects of purging. — Cullen's *Materia Medica*.

thematical,

thematical, and mechanical arts, which are so useful to the purposes of life: let him, first, deduce an hypothesis from natural philosophy, that will enable him to explain the cause of but a single specific difference of things in nature; for instance, let him account for the universal greenness of grass, and why it is never of any other colour, and the like. And if he can do this, I will readily embrace his sentiments; but if not, I shall not scruple to affirm, that all the diligence and caution of a physician should be employed in investigating the history of diseases, and applying those remedies which stand recommended by experience for the cure thereof; pursuing, notwithstanding, that method which is founded on right reason, and not the result of idle speculations. I will therefore briefly deliver what experience hath taught me, relating to the method of exhibiting the *bark*.

17. The *Peruvian bark*, commonly called the *Jesuit's powder*, to the best of my remembrance, ^{A short history of the bark.} began to be esteemed at *London*, for the cure of intermittents, and especially *quartans*, about twenty-five years ago; and indeed very deservedly, as these diseases were seldom cured before by any other method, or medicine; whence they were reputed the *opprobria medicorum*, and not without reason. But not long after it lost its character, and was entirely disused for two cogent reasons: (1.) Because being exhibited only a few hours before the coming of the fit, according to the received custom of that time, *it sometimes destroyed the patient*;* which I remember

* *It sometimes destroyed the patient, &c.* We have before pointed out the most proper time for giving the bark in order

member happened to Mr. *Underwood*, a citizen and alderman of *London*, and to Captain *Potter*, an apothecary in *Black Friars*. This fatal effect of it, though very rare, did, however, justly prevail with the most prudent physicians to refrain its use. (2.) Because though it seldom failed to free the patient from the fit, that would otherwise have come, yet the fit commonly returned again in a fortnight, especially when the disease was recent, and not spontaneously abated by length of time. These reasons weighed so much with the generality, that they lost all the hopes they had formerly conceived of this medicine; nor did they esteem it so material to prevent the access of a fit for a few days, as upon this account to endanger their lives by taking it.

The best
medicine in
intermit-
tents.

18. But having some years since thoroughly considered the extraordinary virtues of the *bark*, I was firmly persuaded that *intermittents* could not be better cured than by this efficacious medicine, provided it were given with proper caution. For this reason I spent much time in studying how to prevent the danger ensuing from its use, and the relapse that succeeded in a few days, which were the two inconveniences to

order to ensure its efficacy, pag. 92, note *; yet still we have had various proofs of its being administered at different periods before the fit; nor have we seen any such fatal effects arise from its being exhibited in this manner; indeed there are few instances of it upon record, and of late years we have neither heard, or read of any such consequences produced by it; we are therefore rather inclined to think that the circumstance here mentioned by our author ought not to be ascribed to the time of this medicine being administered, but to some other undiscovered cause; for of a more effectual and safer medicine in these cases the whole *Materia Medica* cannot boast. *W.*

be avoided, and by means thereof to restore the patient to perfect health.

19. (1.) I conceive that the danger proceeded less from the *bark* itself, than from the unseasonable use thereof; for when a large quantity of febrile matter is collected in the body on the well days, the *bark*, if taken immediately before the fit, obstructs the expulsion of the morbid matter in the natural way (namely, by the violence of the fit) which being hereby improperly detained usually endangers life. But I judged I could remedy this evil, and likewise prevent the fresh generation of febrile matter, by giving the powder directly upon the departure of the fit, so that a stop might be put to the next succeeding one; and by repeating it on the intermediate days, at proper distances, till the approach of a new fit; so that by this means the blood might be impregnated gradually, and consequently safely, with the salutary virtue of the *bark*.

How rendered more certainly effectual.

20. (2.) As the relapse, which generally happened in a fortnight, seemed to me to be occasioned by not sufficiently impregnating the blood with the virtue of the febrifuge, which, however efficacious, was not powerful enough to cure the disease at once, I judged *that the best method to prevent a relapse* * would be to repeat the powder, at proper intervals, before the virtue of the preceding dose was quite spent, even though the *intermittent* appeared to be conquered for the present.

* *The best mode to prevent a relapse, &c.* See Note *, pag. 439.

The method
specified.

21. These considerations led me to the following method, which I now use. When I am called to a person afflicted with a *quartan*, suppose on a *Monday*, if the fit is expected the same day, I refrain from doing any thing, and only give the patient hopes that he shall be freed from the next fit. And, in order to effect this, I exhibit the *bark* upon the two intermediate or well days, namely, *Tuesday* and *Wednesday*, in the following manner:

The febrifuge
electuary.

Take of Peruvian bark, very finely powdered, one ounce; syrup of cloves, or of dried roses, enough to make it into an electuary; to be divided into twelve doses, whereof let the patient take one every fourth hour, beginning immediately after the fit is gone off, and drinking after each dose a draught of any kind of wine.

Or, if pills be more agreeable,

The febrifuge
pills.

Take of the Peruvian bark, very finely pulverized, one ounce; syrup of cloves, enough to make it into pills of a middling size; of which let the patient take six every fourth hour.

But an ounce of the powder may be mixed with a quart of claret, with less trouble, and equal success,*

* *But an ounce of the powder, &c.* Dr. Barker in his *Inquiry into the epidemic Fever*, after observing that by the common method of giving medicines in trifling and insufficient doses, good ones are but too often brought into disrepute, the intention of the *physician* frustrated, and the patient's expectation disappointed, acquaints us that *physicians* ran into this error formerly, with relation to the *bark*, through an over cautiousness, and that *Sydenham* was the first that broke through this constraint, and ventured to give it in large doses. I have a letter of his, (he adds) in manuscript

success, and eight or nine spoonfuls of it given at the intervals above mentioned. I order nothing on *Thursday* when the fit is expected, because for the most part it does not come, the remainder of the febrile matter being despumated, and expelled the blood, by the usual sweats which terminated the preceding fit, and a collection of fresh matter being prevented by the repetition of the powder on the days between the fits.

22. But in order to prevent a relapse, which was one of the inconveniences above recited, on the eighth day after taking the last dose, I always ordered the same quantity of the powder, (*viz.* an ounce divided into twelve doses) to be taken exactly as the former was. But though a single repetition of the *bark* in this manner frequently cures the disease, yet the danger is not over unless the patient will be ruled by his phy-

The first quantity of the *bark* to be repeated three or four times.

nuscript now before me, wherein he says, "I have had but few trials, but I am sure that an ounce of *bark*, given between the two fits, cures, which the *physicians* in *London*, not being pleased to take notice of in my book, or not believing me, have given an opportunity to a fellow, that was but an apothecary's man, to go away with all the practice on *agues*, by which he has got an estate in two months, and brought great reproach on the faculty." — This letter was wrote in *October* 1667, which falls in so exactly with the time of *Talbor's* first appearance as a practitioner, (for we have an account of his being in *France* in 1679*) that *Sydenham* must certainly allude to him. And it appears from hence that *Sydenham* was the person who struck out the method of giving an ounce of *bark* between the fits, instead of a dram, or two, which was the usual dose before that time; which method *Sir Robert Talbor* has generally hitherto had the credit of, and for which he was knighted by king *Charles II.*

* Feoffroy, *Materia Medica*, tom. ii. pag. 183.

fician, and repeat it thus a third or fourth time; especially when the blood has been impoverished by some preceding evacuation, or the body unadvisably exposed to the cold air.

To be given with *laudanum*, if it purges.

23. Now though there is no inherent purgative virtue in this medicine, yet a violent purging is frequently occasioned thereby, from some peculiar *idiosyncrasy* in the constitution. In this case it is indispensably necessary to exhibit *laudanum* therewith, to prevent its having this effect (which is manifestly as opposite to its own nature, as it is to this disease) and that it may be retained long enough to answer its ends. Therefore I order ten drops of *laudanum*, to be given in a little wine, after every other dose of the powder, if the looseness continues.

The same process to be used in *tertians* or *quartans*.

24. I follow the same method in other intermittents, whether *tertians* or *quartans*; for immediately after the fit is gone off, in both I administer a dose of the powder, and repeat it as frequently during the intermission, as the nature of the disease will admit; but with this difference, that whereas a *quartan* can very rarely be cured with less than an ounce divided into proper doses, a tertian may be so far conquered with six drams, or at least to give a respite.

Though there be only a remission.

35. But though *tertians* and *quotidians* after a fit or two may seem entirely to intermit, yet, as I have before observed, they afterwards frequently degenerate into a kind of continued fever, and only come to a *remission* even on those days that promised an *intermission*; especially when the patient has been kept too warm in bed, or been tormented with medicines to carry off the intermittent by sweat. In this case, I have no other way left, but to seize the opportunity of

of the *remission*, though it be ever so small; and accordingly I give the powder immediately after the fit is gone off, as near as I can conjecture, and repeat it every four hours, as above mentioned, without waiting for a regular intermission, because otherwise the *alexiterial* virtue of the *bark* cannot be communicated to the blood in so short an interval.

26. And though the present reigning *intermittents*, after the second or third fit, incline to *continued* fevers, yet they must be referred to the *intermittent* kind; and therefore I scruple not to order the *bark*, even in the most continued of this sort; the repetition of which in the above-mentioned manner will certainly remove the disease, provided the constant warmth of the bed, and the improper use of cardiacs, have not rendered it a *continued fever*; in which case I have frequently found the *bark* fail. Nor have I ever found the wine wherein the *bark* is administered, do the patient any harm, which might reasonably be suspected; but contrariwise, the heat, thirst, and other febrile symptoms, generally went off, soon after taking a sufficient quantity of it. But it must be noted here, that the nearer the *intermittent* approaches to a *continued fever*, either spontaneously, or from using too hot a regimen, the more necessary it is to exhibit a large quantity of the *bark*; for I have sometime found that the *intermittent* would not yield to less than an ounce and half, or two ounces of the *bark*.

27. As some persons can neither take the *bark* in powder, in an electuary, nor in pills, I give them an infusion of it, made with two ounces of

The more the intermittent tends to a continued fever, the more bark must be given.

To be given in infusion, where it can be taken in of no other form.

of bark, grossly powdered, and infused cold for some time in a quart of *Rhenish wine*; which being several times passed through a fine strainer, becomes so clear, as not to be disagreeable to the nicest palate. Four ounces of this infusion, after it has stood some days, should seem equivalent in virtue to a dram of the bark in substance; and as it is neither unpalatable, nor lies heavy upon the stomach, it may be taken twice as often as any other form of it, till the disease vanishes.

In case of vomiting, this must be stopt before giving the bark.

28. When this disease has assumed no regular appearance, it is sometimes attended with an almost continual vomiting, so that the bark cannot be retained in any form; in which case the vomiting must be stopt first, before it can be administered. For this purpose I order a scruple of salt of wormwood* to be dissolved in a spoonful of fresh juice of lemons, and taken six or eight times in the space of two hours; and afterwards I give sixteen drops of liquid laudanum in a spoonful of strong cinnamon water; and soon after, if the vomiting stops, the patient must begin with the bark.

To be given in a julep to children.

29. For children, who, by reason of their tender age, can scarce bear to take this remedy in any other form, at least in a suitable quantity

* I order a scruple of salt of wormwood, &c. This draught will be rendered more efficacious by giving it during the state of fermentation; or if the salt is first dissolved in any proper menstruum, then taken, and the lemon juice immediately afterwards, so that fermentation may take place in the stomach: exhibited in one of these ways, I have seen a vomiting very quickly stopped, which effect had been tried to be produced in vain, by saline draughts taken in the common mode. W.

to effect a cure, I generally prescribe* the following julap :

Take of black-cherry water, and Rhenish wine, The febrifuge julap.
each two ounces; Peruvian bark, finely pow-

* For children I generally prescribe, &c. See Note *, pag. 92, to which we shall add; that as we find children of all ages, with respect to the refusal of taking medicines not perfectly agreeable to their taste, we are happy to have it in our power to supply a medicine; from the labours of the indefatigable Dr. Fowler of Stafford, which has been found efficacious in intermittents, that is free from the above inconvenience; he has tried the power of arsenic in these cases, and his endeavours have been crowned with success: The Doctor orders, "Arsenic very finely powdered, and fixed alkaline salt, of each sixty-four grains; distilled water, half a pint: these are to be put into a Florence flask, and placed in a sand heat; the water is then to boil slowly till the arsenic is perfectly dissolved; when the solution is cold, half an ounce of compound spirits of lavender is to be added, and of distilled water another half pint, more or less, so that the whole of the solution shall yield by measure a pint, or rather weigh fifteen ounces and an half." The Dr. proposes that the doses should be, to patients from two to four years of age, from two to four drops; from five to seven years, may take from five to seven drops; from eight to twelve years, may take from seven to ten drops; from thirteen to eighteen and upwards, may take twelve drops as a dose: to adults, unless when some directions were given, it was exhibited in a teacup-full of water; to children in the same vehicle, but in less quantity: when it was administered three times a day, the hours were six o'clock in the morning, two in the afternoon; and ten in the evening; when twice only, the hours were ten in the morning and ten in the evening.

The account of the success of this medicine stands not alone upon the faith of Dr. Fowler. Dr. Arnold of Leicester and Dr. Withering of Birmingham have both tried the powers of arsenic in intermittents; the former seldom has known it fail in eighty cases in which he administered it; the latter out of forty-eight patients to whom he gave it, cured thirty-three: who also adds an account of Mr. J. Free, junior, who had given it to more than a thousand without hazard or inconvenience. — See *Medical Reports of the effects of Arsenic*, by Dr. Fowler.—W.

Of the epidemic Diseases

dered, three drams; syrup of cloves, an ounce: mix them together for a julap. Let the child take a spoonful or two every fourth hour (according to his age) till the fits vanish, dropping into every other dose, in a case of a looseness, one or two drops of liquid laudanum.

The bark, in tertians or quotidian, does not always put by the fit the first time of taking it.

30. It must farther be observed, that the intervals between the fits in *tertians* and *quotidians* are so short, that there is not sufficient time to impregnate the blood thoroughly with the febrifuge virtue of the bark; so that it is not possible that the patient should so certainly miss the next fit the first time of taking it, as it commonly happens in a *quartan*; for the medicine in these cases will frequently not perform the expected cure in less than two days.

What to be done in case of a relapse.

31. It must also be noted, that if the patient, notwithstanding the observance of the cautions above delivered, should relapse, which happens seldom in a *quartan* than in *tertians* or *quotidians*, it will become a prudent physician not to adhere too closely to the method of giving the bark at the above-mentioned intervals, but to attempt the cure, as his judgement shall direct, by some other procedure; and here the *bitter decoction* is generally esteemed a very powerful medicine.

The regimen in intermittents.

32. With respect to diet and regimen, the patient must be allowed the use of all sorts of solid or liquid aliments that agree with his stomach; fruit and cold liquors always excepted, because they impoverish the mass of blood, and are very apt to occasion a relapse. Let his food therefore be flesh of easy digestion, and good juices, and let him use wine moderately for his common drink; by the sole use whereof I have some-

sometimes recovered such habits as have been in a manner fortified by the frequent return of the intermittent against the bark, so as never to yield to its salutary virtue. The patient likewise must not advisedly expose himself to the cold air, till the blood has recovered its former healthy state.

33. It must be noted here, that though, in treating of intermittents heretofore, we recommended due purging after the disease was gone off, yet this practical caution is only to be understood of such intermittents as either went off spontaneously, or were cured by some other medicine and not by the bark. For when the cure is effected by this, cathartics are unnecessary and hurtful; so powerfully does the bark, alone, relieve the fits, and the indisposition they occasion. Hence therefore all kinds of evacuations must be refrained; for the gentlest purge, nay even a glyster of *milk* and *sugar*, will certainly endanger a relapse, and perhaps reproduce the disease.

A caution concerning purging.

34. And here it is proper to mention, that a very remarkable symptom did sometimes succeed these intermittents in the first years of this constitution. For the fits did not begin with chillness and shivering, which were succeeded by a fever; but the patient was seized with the symptoms of a true *apoplexy*, though in reality, how nearly soever it resembled this disease, it was nothing more than the effect of the fever's seizing the head; as plainly appeared from other signs, as well as the colour of the urine, which in *intermittents* is mostly of a deep red (but not so red as in the *jaundice*) and likewise lets fall a *lateritious* sediment. Now though in this case

These intermittents had symptoms resembling a true *apoplexy*.

all kinds of evacuations seem to be indicated, in order to make a revulsion of the humours from the head, as is generally practised in the genuine apoplexy, yet they are to be wholly refrained, because they are very prejudicial in the intermittents, whence this symptom originally proceeds, and consequently endanger life, as I have observed. On the contrary, therefore, we must wait till the fit goes off spontaneously, when the bark (in case it could not be given sooner) must be immediately exhibited, and carefully repeated in the intervals, till the patient be perfectly recovered.

Aged persons sometimes seized with a diabetes, from ill management.

35. It sometimes happens, though very rarely, that the aged, after having been long afflicted with this disease, and weakened by improper bleeding and purging, are seized with a diabetes,* though

* *Are seized with diabetes, &c.* There seems at present much uncertainty respecting this disease; various are the opinions relative to the proximate cause; MEAD considers it as an affection of the liver, not of the kidneys; others attribute it to spasms of the secretory organs; some to a diminution of perspiration, or the increased inhalation. It is generally thought by some to deduce its origin from the laxity of the secretory organs of the kidneys, or from some alteration of these organs. Dr. HOME, who has taken some pains on this subject, and has given two accurate histories of this disease, with the modes of cure, unsuccessfully attempted, though the two patients had exhausted all that experience had ever recommended, and almost all that theory could suggest, considers it as arising from a defect of the animal or assimilatory powers of the constitution, by which the aliment is converted into the nature of our body, and defines it, "An increased discharge of sweetish urine; perpetual thirst; a dry, and most commonly scaly skin." Of which he distinguishes two species.

1. *Diabetes aquosa*, when the urine is of a diaphanous watery colour; and,

2. *Lac-*

though the intermittent be perfectly cured. For their blood being by this means so impoverished, as to be utterly unable to assimilate the juices received into the mass, they pass off crude and undigested by the urinary passages, and, in consequence of the large quantity of urine which is voided every time they make water, the strength is gradually impaired, and the substance of the body in a manner washed away. *The indications of cure in this case,** and in every diabetes, however occasioned, How cured.

2. *Lactea*, when it is of a milky whiteness; and thinks it is rightly arranged by SAUVAGES in the class of fluxus; but improperly in the order feri-fluxus; as the urine has none of the marks of serum. — *Clinical experiments, &c.*

With respect to the proximate cause, Dr. CULLEN seems to hold the same opinion; for he says, It is owing to some fault in the assimilatory powers, or in those employed in converting alimentary matters into proper animal fluids; but arranges the disease under the order SPASMI, because hardly any secretion can be increased without an increased action of the vessels concerned in it, and some instances of this disease are attended with affections manifestly spasmodic. — *Practice of Physic*, vol. iv. — He defines it; “Most commonly a preternatural, profuse, and chronic flux of urine,” of which he forms two species;

1. *Diabetes mellitus*; when the urine has the smell, colour, and taste of honey.

2. *Diabetes insipidus*; when the urine is limpid, but not sweet; but is uncertain whether this last may be a species which frequently occurs. — *Synopsis Nosologiæ Methodicæ*. — *W.*

* *The indications of cure, in this case, &c.* From considering the various accounts of this disease it appears obvious, that we must endeavour to prevent the too free secretion of urine by diverting the fluids to the surface, and invigorating the system at the same time. Dr. Brown in his *Elementa Medicinæ*, when speaking of the diabetes lenior, says, “In this asthenic disease, which is to be called the milder kind, the urine flows in too great a quantity, but is not poured forth so copiously as in the severer species

occasioned, are, (1.) to enrich and strengthen the blood, and (2.) to stop the preternatural discharge by urine.

For

“ of the same name, the perspiratory powers performing
“ their office languidly.

“ To conquer this effect, much more frequent than is be-
“ lieved, the body is to be stimulated by food, generous
“ liquors, proper exercise not too violent, for that is de-
“ bilitating, nor too indolent, for that supplies not a suf-
“ ficient proportion of stimulus, and in preference to all
“ things which restrain the flow of urine, none of which
“ ought to be omitted, perspiration should be supported.”
—*Elementa Medicinæ*. vol. ii.

Two cases in the Medical Commentaries are recited of the diabetes successfully treated, by the use of Dover's powder; in one of which twenty grains was given every night, and that gradually augmented, till in the course of three weeks seventy grains were administered; at which period the patient fell into a profuse sweat, which continued without intermission for thirty-six hours: during that time, he felt himself comfortable, made less urine, his thirst abated, and his skin came to its natural feel; and in a few weeks was so far recovered, that he had in some measure gained his flesh though before almost worn to a skeleton, and his former florid complexion: in the other a similar treatment was similarly successful.—*Med. Comment.* vol. ix.

One case I shall mention which fell under my own observation some years ago; A gentleman in the decline of life was seized with a diabetes; he made a large quantity of urine, of a very light amber colour, chiefly in the night, voiding from his time of going to bed till morning, from six to eight pints, and sometimes more; it had some very slight sweetness; his pulse was quick, his thirst very great, and he complained of a sense of weakness in his loins; he had always lived a regular life, and much used to riding on horseback; and often visited the fens of Lincolnshire and Holderness, where he resided usually for some time together. He complained also at first of a load and oppression at his stomach, particularly after eating; he was neither corpulent nor otherwise, nor subject to any particular complaint. At first, he took a vomit, which totally relieved his stomach; afterwards was put upon a course of bark, cascarilla,
and

For instance, *Take of Venice treacle, an ounce* The restrin-
and half; conserve of orange peel, one ounce; gent electu-
diascordium, half an ounce; candied ginger
and nutmeg, of each three drams: Gascoign's
powder, a dram and half; of the outward bark
of pomegranate, the root of Spanish angelica,
red coral prepared, and the troches of Lem-
nian earth, each a dram; bole-armoniac,
two scruples; gum arabic, half a dram; sy-
rup of dried roses, enough to make altogether
into an electuary: of which let the patient
take the quantity of a large nutmeg in the
morning, at five in the afternoon, and at bed-
time, for the space of a month, drinking after
each dose six spoonfuls of the following infusion:

and lixivium martis; from these he found some though
 finall alleviation of his symptoms; he rode on horseback
 every day, and used the flesh brush morning and evening;
 his diet was of the incrassating kind, and his chief liquor
 old port, after dinner; to his victuals, his beverage port and
 water; as he recovered not from this regimen and medi-
 cine, to his mixture was added the tincture of cantharides,
 twenty drops to each dose twice a day, which he gradually
 increased to sixty each time; and by persisting in these
 means was soon perfectly recovered. I mention this, be-
 cause in cases wrapt up in so much obscurity, every trivial
 history may serve to throw some light upon the subject; at
 least where success appears to be the result of experiment:
 and I am persuaded that stimulants joined with tonics and
 astringents bid the fairest for relieving this complaint, when
 curable: nor do I see in all those particulars observed with
 such laudable attention by Dr. HOME, that this plan was
 ever adopted. Nor can we say what precise limits shall
 be put to the doses of those medicines, for one constitution
 will often bear double, nay treble the quantity to what is ne-
 cessary for another to produce the full effect; therefore they
 should be given at first in moderate proportions, and pushed
 to their utmost extent gradatim.

Alum whey; an infusion of oak bark, in lime water,
 Bristol, and chalybeate waters, vitriolum caeruleum, have
 been by different writers warmly recommended. *W.*

The bitter
infusion.

Take of the roots of *elicampane*, *masterwort*, *angelica*, and *gentian*, of each half an ounce; the leaves of *Roman wormwood*, *white horehound*, the *lesser centaury*, and *calamint*, each one handful; *juniper berries*, an ounce; when these ingredients have been sliced and bruised, as they require, pour upon them five pints of *canary*, and let them stand together in a cold infusion, and strain it as it is used.

The patient's diet should be food of easy digestion, as *veal*, *mutton*, and the like; he must forbear *garden herbs*, and *fruits of all kinds*, and drink *Spanish wine* at meals.

The *fluor
albus* cured
by nearly
the same
treatment.

36. That obstinate and lasting disease, the *fluor albus*, may be cured nearly* by the same method and

* *The fluor albus*. SAUVAGES arranges this disorder under the same heads as the *diabetes*. Some say, that the *diabetes*, *fluor albus*, and *hectic fever* are of the same general kind.

Dr. CULLEN places it under the class of *pyrexia*, *febrile affections*, and makes it the fifth species of *menorrhagia*, which he places under the order *HEMORRHAGIÆ*, names it *MENORRHAGIA ALBA*, and shortly defines it,

"A serous menorrhagy without any local injury in women not pregnant," and supposes the proximate cause a laxity of the extreme vessels of the uterus, from whence the *catamenia* are discharged; but though the discharge may arise from those vessels of such fluids from whence the disease takes its name now and then; yet it is not alone to them confined, for a number in the *vagina* pour out similar contents, and equally contribute to constitute the complaint. If, therefore, there should be a discharge of any fluids not sanguinary, though observing the periods of the *menfes*, the *menfes* not appearing, I should consider it as a *leucorrhœa catamenialis*, which sometimes happens; if it appears indiscriminately, or constantly, a *leucorrhœa vera*. It chiefly affects relaxed and delicate constitutions, and happens to girls and women of all ages, from three years old to those who have or have not menstruated, before and after the period

and medicines as the *diabetes* just mentioned; for the curative indications in both are the same, how much soever these diseases may seem to differ.

period of the menses; and even to women with child. It observes no certain type or period in common; sometimes flows more copiously, sometimes more sparingly, sometimes accompanies the menses, and sometimes continues when they have ceased. In the beginning it is most commonly mild, but in progress of time acrimonious and painful, and changes from a white colour to that of a yellow or green cast, and smells offensive. The best mark of distinction between this and the *blenorrea virulenta* is, that the former is viscid, the latter thin and ferous.

HIPPOCRATES has elegantly described the state of this disease, when inveterate: "The fluor albus," says he, "is like the white urine of an ass, the face becomes tumefied, and both parts under the eyes swell, and put on dropical appearances; the eyes have an unpleasant look; the colour of the body is pallid, and the lower part of the abdomen tumid; the legs swell, and retain the marks made by the fingers on pressure; there is a gnawing pain of the stomach, whilst the patient is fasting, and when she vomits, as if from an acid water. On ascending any steep place a shortness of breathing comes on, a coldness of the legs, weakness of the knees, the uterus is more than commonly open, and being heavy sinks down towards its mouth; such are cured of this disease with difficulty."—*Hippocrates de Morb. Mulierum*, lib. ii. sect. 9.—*W.*

May be cured nearly, &c. The indications of cure here are, to stop the leucorrhœal flux by giving strength to the uterine and vaginal vessels, and invigorating the system.—The cure is best begun by emetics to clear the *primæ viæ*, and gentle aperients, such as rhubarb and *oleum Ricini*, which last may be occasionally continued during the course of other medicines, which should be of the tonic and stimulant class, particularly bark, chalybeates, and cantharides; *pulvis stypticus*; frictions applied to the loins, and blisters; by these means I have seen numbers cured, who had laboured a long time under this disease, arising apparently from a relaxed state of the vessels, whose habits were becoming cacochymical from the length of its continuance. The diet should be of the agglutinant and nutritious kind; and in-
glass

differ. But in the cure of the *fluor albus* bleeding must be used once, and afterwards purging thrice with two scruples of the greater *pil. cochia*, before we proceed to strengthening medicines; but no oftener during the whole process, because all kinds of evacuations destroy the virtues of strengthening remedies. But this by the way.

The bark
best alone.

37. And these are the observations I had to communicate, in a summary way, concerning the use of the *Peruvian* bark; for my design was not to consult the pomp of medicine. And in reality they who add any thing more to it than a vehicle which is necessary to carry it into the stomach, in my opinion, either to do it ignorantly, or fraudulently, which every good man must needs detest, who, as a part of the community, would not be induced to commit such a fraud for his private advantage. As to what remains, if my contemporaries had vouchsafed to consider what I published four years ago in my history of

glass dissolved in milk, or whatever of food kind is administered in a liquid form; gentle exercise and free clear air are necessary assistants; hot rooms and warm liquids should be avoided, and vinous liquors preferred to those which are watery. Diuretics also may be exhibited in small doses, but not to create nausea or sickness; the best of which class is dulcified spirit of nitre or vitriol. Towards the close of the cure gently astringent injections may be thrown up the vagina; the cold bath, *adapted to the strength of the patient*, is also beneficial, and courses of chalybeate waters, as those of Tunbridge, may be persisted in for some time. These applications properly regulated will be in general sufficient, where the disease arises from the most simple cause; but should it be induced or supported by fungous excrescences in the uterus, ulcers, scirrhus, or carcinomatous affections, we then must consider it as symptomatic, and apply such remedies as are adapted to cure or palliate those complaints. *W.*

acute

acute diseases, (which, it is highly probable, I was acquainted with before that time) concerning the method of exhibiting the bark in the intervals of the fit, and the succeeding repetition of it, when the disease is gone off, perhaps the lives of many persons had been saved; how much soever some men contemned my slender endeavours for the public good, and slighted the cautions there delivered in the following words, which briefly contain what I have here judged proper to enlarge upon, *viz.*

38. “ The greatest caution must be had not to give it too early, namely, before the disease ^{How to be given.}
 “ be in some measure spontaneously abated;
 “ unless the extreme weakness of the patient
 “ requires it to be exhibited sooner; *for the ad-
 “ ministering it to soon* * may render it ineffectual,
 “ and

* *For the administering it too soon, &c.* What Dr. LANGRISH, in his modern Theory and Practice of Physic, says on this head, with a very slight alteration, is in this place applicable; “ I have often known fatal effects from exhibiting the *bark* too soon, or where there has only been a *remission* of the fever for a few hours, without an abatement of the bad symptoms. And indeed, if we consider that the *viscera* are loaded with a heavy, pituitous, glutinous matter; that the capillary, sanguine, and lymphatic arteries are obstructed, and that neither of these impediments are perfectly removed, when there is only a remission of the fever, it will evidently appear, that the administration of the *bark* must necessarily be attended with the utmost danger; for to constrict the vessels, and to lessen the diameters of the secretory and excretory ducts, can seldom be attended with success. Add to this, that if there be the least suspicion of an *inflammatory* state of the blood, the *bark* is direct poison.

In long continued *agues* or *intermittent fevers*, which have baffled the *bark*, and many other medicines, I have met with more advantages from small doses of *rhubarb* and *calomel*, than from any other medicines I ever tried,

The

“ and even fatal, if a sudden check should be
 “ hereby given to the vigorous fermentation of
 “ the blood in the act of despumation. (2.)
 “ We must not order purging, much less bleed-
 “ ing, to carry off a part of the febrile matter,
 “ and render the bark more effectual; for
 “ they both weaken the tone of the parts,
 “ whence the disease returns so much the more
 “ speedily and certainly, after the virtue of the
 “ bark is spent. It were better, in my opinion,
 “ to impregnate the blood with this medi-
 “ cine by degrees, and at distant intervals from
 “ the fit, rather than endeavour to stop it at
 “ once, just upon its coming; for by these
 “ means the bark has more time to produce its
 “ full effect in, and besides, the mischief is
 “ avoided that might happen by putting a sud-
 “ den and unseasonable stoppage to the imme-
 “ diately approaching fit. (3.) The bark must
 “ be repeated at short intervals, that the virtue

The modern practice of joining *rhubarb* with the *bark* is an excellent method in gross and plethoric habits, or where there is the least suspicion of the *liver*, *spleen*, *meseraic vessels*, &c. being fouled or obstructed.

The *cold bath*, where age or no inward weakness forbid it, is exceeding proper, especially in the summer season, to recover the lost tone of the fibres, and to grind and comminute the viscid, ill-conditioned juices, and to prevent catching cold.

Van Swieten greatly disapproves of putting a stop to the immediately approaching fit by the *bark*; because by checking the motion, which might otherwise remove the obstruction near the ultimate branches of the arteries, the patient is frequently destroyed, of which there are some examples: and hence it is that this medicine (which is of its own nature salutary) comes to be blamed; whereas in truth the fatal effect ought in all reason to be ascribed to the carelessness of the prescriber.—*Comment. in Boerb. Aphorism.* tom. ii.—*W.*

“ of

“ of the former dose may not be entirely gone
“ off before another be given; and by repeat-
“ ing it frequently the disease will at length be
“ perfectly cured. These reasons led me to
“ prefer the following method of giving it :

“ *Take of the Peruvian bark, one ounce; syrup* The febrifuge electuary.
“ *of roses, two ounces; make an electuary*
“ *thereof: take the quantity of a large nut-*
“ *meg, every morning and night, on the*
“ *intermediate, or well days, till the whole be*
“ *taken; and let it be repeated thrice, inter-*
“ *posing a fortnight between each time.*

39. But though the bark is the best medicine Vernal tertians, how cured without the bark.
hitherto discovered, for the cure of these diseases,
yet I have known persons in the prime of life,
and of a sanguine constitution, cured of vernal
tertians by the following remedies. For in-
stance; let the patient be bled in the arm on
the intermediate day; and some hours afterwards
upon the same day, give an emetic of the infu-
sion of *crocus metallorum*, regulating the time in
such manner that its operation may be over be-
fore the fit comes; and as soon as it is gone off,
*let him begin with the following electuary: **

Take of the extract of wormwood, gentian, and the The stomachic electuary.
lesser centaury, each two drams; mix them to-
gether; divide the whole into nine doses, of
which let one be taken every fourth hour, drink-

* *Let him begin with the following electuary.* The fol-
lowing bolus has cured some, when every thing else had
failed :

Take of the flowers of camomile in powder, half a dram;
rock alum, five grains; of the simple syrup, enough to
to make them into a bolus, to be taken every three hours in
the intermission.

ing

ing after each dose, of the bitter decoction without purgatives, and of white wine, each three ounces.

In indigent persons.

40. There is another method of curing these tertians in persons of low circumstances, who are unable to bear the expence of a long course of medicines :

The sweating draught.

Take of Virginian snake weed, in fine powder, a scruple ; white wine, three ounces : mix them together. Let the patient take it two hours before the fit comes, and being well covered with cloaths, sweat three or four hours afterwards, and let it be repeated twice in the same manner.

Intermittents appeared anew in 1679.

41. In the following year, viz. 1679, these intermittents re-appeared at the beginning of July, and increasing every day proved very violent and destructive in August. But having already treated of these at large, I shall only observe, that they gave way to a new epidemic which proceeded from the manifest qualities of the air in November.

A cough arose in November.

42. For at the beginning of this month a cough arose, which was more epidemic than any I had hitherto observed; for it seized nearly whole families at once. Some required little medicine, but in others the cough occasioned such violent motion of the lungs, that sometimes a vomiting and a vertigo ensued. On the first days of the disorder, the cough was almost dry, and the expectoration not considerable, but afterwards the matter in some measure increased. In short, from the smallness of the expectoration, the violence of the cough and the duration of the coughing

coughing fits, it seemed greatly to resemble the *convulsive hooping cough* of children; only it was not so severe. But it was attended with a fever and its usual concomitants, in which particular it exceeded the convulsion cough, for I never knew that accompanied with those symptoms.

43. Though coughs are common at the beginning of winter, yet every body wondered to find them so very frequent this year; which I conceive proceeded chiefly from this cause: the month of *October* having been wetter than usual, (for it seldom ceased raining) the blood, corresponding with the season, drank in abundance of crude, watery particles, by reason that perspiration was stopt upon the first coming of the cold, whence nature endeavoured to expel them, by means of a cough, through the branches of the pulmonary artery, or, as some will have it, through the glands of the wind-pipe.

Whence it
affected
numbers.

44. When there is occasion for medicine, I am sure the cure is best attempted by evacuation, namely by bleeding and purging; for the redundant serous particles cannot be so commodiously expelled by any other method, as by these two evacuations, which greatly empty the veins.

I Bleeding and
purging ser-
viceable
herein.

45. For as to *pectorals*, setting aside their pleasing the patient, I own I do not conceive how they can contribute to remove the cause of the cough; since their whole operation seems to consist, either in thickening the matter when it is too thin to be expectorated, or in attenuating it when, by reason of its viscosity, it comes up with difficulty. This I certainly know, that it is lost time to give such medicines, and that sometimes the blood is so impoverished by the

Pectorals
useless.

reten-

Sudorifics
unsafe.

retention of the ferous particles which are prejudicial to nature, and further that the lungs, irritated by the violence of the cough, are so shaken by the great and almost continual motion, that a consumption is often occasioned thereby, from which the patient should be freed by hastening the cure. Nor are sudorifics much safer; for sometimes they cause a fever, and sometimes also the particles of the blood, which are easily inflamed, are so thrown upon the *pleura*, that a *pleurisy* is occasioned, which happened to great numbers in the course of this epidemic cough, and was very dangerous.

The cure
particularized.

46. Accordingly I took away a moderate quantity of blood from the arm, and applied a sufficient large and strong blister to the neck, in order to make a revulsion of part of the peccant matter. Afterwards I exhibited a lenient cathartic every day, made of an infusion of *sena* and *rhubarb*, with *manna*, and *solutive syrup of roses*, till the symptoms abated considerably, or a perfect recovery ensued; or if draughts were disagreeable, I directed two scruples of the greater *pil. cochia*, to be taken every morning at five o'clock, sleeping upon them.

The *hooping cough* cured by the same treatment.

47. By this practice of venesection and repeated purges, and by this only, is conquered the convulsive or *hooping cough* * in children; an obsti-

* *The hooping cough, &c.* This is acknowledged universally to be a convulsive cough, arranged by Dr. Cullen under the class, *NEUROSES*; order, *SPASMI*; the GENUS, named *PERTUSSIS*; and considered a disease arising in the vital functions, which he concisely defines,

“A contagious disease, a convulsive, strangulating cough, with inspiration sonorous and repeated, and often attended with vomiting.”—*Synopsis Nosologia Methodicæ*, vol. ii.

It

obstinate disorder, which scarcely any other method will subdue: What the skill of others may

It is described by HOFFMAN in the following manner :

This disease makes its attacks with such extreme violence and with so great concussion of the whole body, that the miserable objects appear very often almost suffocated.— Sometimes, and chiefly in the beginning, the cough is dry; and throws off either none or a very small quantity of thin serum, more or less acrid; sometimes it is moist; and then a blackish or blue mucus, often extremely tenacious, is evacuated, at the same time the extremities grow cold; the bowels are costive, the urine is thin, and the vital juices are forced up in large quantity and with great force to the superior parts, breast, and head; from whence, during the paroxysm, the face grows turgid with blood, and red; the veins swell; the arteries beat stronger and quicker; the eyes appear prominent, the tears flow, the eyelids puff up; and sometimes the blood itself, a sneezing coming on, is forced out from the nostrils; sometimes the vessels of the lungs are ruptured, and there arises a spitting of blood; a hiccough often accompanies it, and also the stomach is affected with strong vomitings, by which means the feces and urine pass off involuntarily. In some, particularly infants, it occasions ruptures; and Hippocrates remarks, Aph. 46. sect. 6. they become gibbous.—There is a remarkable case recited of the dorsal vertebræ being separated by the vehemence of the cough; nor ought we to forget, that from this cause apoplexy may arise, and that BOYLE has observed, from such a cough, a sudden loss of memory and the reasoning faculty, and also paralysis of the hands and other limbs, have originated.—*Medicinæ rationalis Systema*, vol. iii. sect. 2. cap. 3. §. 12.

To which we may add, that there are some cases where this disease certainly arises from this specific contagion, that appears only like a common catarrh; still it is most commonly attended with a peculiar kind of sound, different in different cases, during some parts of the coughing fit, distinguished by the term *hooping*, which arises in the following manner: “When many expirations have been convulsively made, and thereby the air is thrown out in great quantity by the lungs, a full inspiration is necessarily made, which, by the air rushing in through the glottis

Vol. J. H h “with

may effect in this case, I am not able to say; but know that, for my own part, *I have tried remedies of almost every other kind, and tried them in vain.** It must be observed, that only the milder

“with unusual velocity, gives that peculiar sound.”—Cullen’s *Practice of Physic*, vol. iii.

Authors are greatly divided with respect to the cause and seat of this disorder.

HOFFMAN says, that the material cause of this cough resides in a thin, acrid, and almost caustic humour deposited on the sensible tunics of the air vessels, vellicating them greatly; or it may only fix its seat on the larynx and aspera arteria, and then it has for its associate a continued and very troublesome titillation of the fauces; or it may fall lower on the pulmonary bronchiæ, and the effort of coughing is extremely violent; some say it is a convulsion of the diaphragm, excited by sharp humours in the primæ viæ; others, that it proceeds from a disorder in the stomach, or caused by tough viscid matter lodged in its coats. Dr. Butler fixes its seat in the intestines, from a morbid irritability of the mucus glands, and thinks, that contagious miasmata are the occasional cause. Dr. Cullen, that it is a specific contagion, having a peculiar determination to the lungs, and producing particular effects there; and besides the symptoms already enumerated, that it is frequently accompanied with febrile affections, sometimes from the very beginning, but more commonly only after the disease has continued for some time, not appearing under any intermitent form, but with evident exacerbations towards evening, continuing till next morning; and also at that time a difficulty of breathing is a frequent concomitant, not only before or after the fits of coughing, but constantly present, though in different degrees in different persons: upon the violence and obstinate continuance of which two symptoms the fatality of the disease chiefly depends, when such is the unhappy termination. *W.*

* *I have tried remedies of almost every other kind in vain.* Though Sydenham speaks with such certainty of this mode of cure by bleeding and repeated purging, still experience convinces us it will not always succeed. The modern practitioners imitating very wisely the efforts of nature, as the proximate cause of this disease, seems to be wrapt in so much

milder cathartics are to be used, and these given only by spoonfuls, with due regard to the age of the patient. Such gentle and gradual evacuations effect the cure, as I imagine, by easing the lungs, which though they are not found in this distemper to contain much of any ferous humour, yet are forced into these violent fits of coughing, by fervid and spirituous vapours thrown upon them, at certain times, by the mass of blood; and therefore best relieved by directing these vapours through the lower

much obscurity, order in the beginning a bleeding or two, and keeping the body open with gentle laxatives; copious bleeding and strong purgatives being prejudicial in general to spasmodic complaints; and as the fits of coughing cease after free expectoration or vomiting, emetics are often repeated, and expectorants, such as full doses of antimonials, and nauseating ones, which answer these intentions, and determine the fluids to the surface, hindering, or lessening at least, pulmonic accumulation; and in order to mitigate the cough, gentle narcotics are now and then exhibited.—Cicuta has been highly recommended, and thought extremely beneficial, begun in doses of a grain once or twice a day, and gradually increased as the patient can bear it. Infusion of cup moss, castor, bark, and this last, joined with pargoric elixir and tincture of cantharides, have each of them been separately extolled. But it is best to consider the cough in two points of view; first, as proceeding from the immediate action of contagious miasmata; second, from the result only of habit; and from hence regulate our mode of cure. For the first three or four weeks, bleeding, emetics, small doses of antimonials, and the use of cicuta, with occasional gentle opiates and laxatives, should be adhered to; these will prevent mischief, and weaken the violent effects of miasmatic action. Afterwards stimulants and astringents should be administered; these will strengthen the system, give tone to the parts already weakened by the repetition of the convulsive shocks, and hinder them from being thrown into the same state, which they are apt to be, from debility and custom, induced by violence and long continuance of the disease. W.

bowels, and breaking their force by a contrary direction.

Bleeding to precede purging in the beginning of epidemic diseases.

48. But in the first stage of epidemic diseases, of whatsoever kind they be, great care must be had *not to purge before bleeding*.* For the diseases which arise from an epidemic constitution of the air, are either actually fevers, or upon the least occasion degenerate into fevers; so that a fever may easily be caused by the disturbance raised in the blood and juices by the mildest purgative, and the heat succeeding it, which nature had otherwise expelled by the usual evacuations of the morbid matter; as for instance, by a *catarrh* or an epidemic cough, of which we now treat, or by a *diarrhœa*, when the epidemic fever has a tendency to that discharge. The same may be said of any other constitution of the air, that disposes the body to some peculiar fever, which does not always actually happen, because nature expels the morbid matter from the blood by some suitable evacuations. This I

* *Not to purge before bleeding, &c.* Our author in various parts of his works lays this down as a rule, supposing that purgatives always created some constitutional disturbance; therefore, to prevent any addition to the febrile commotions already raised, or for fear of putting the febrile cause in action, he thinks it lessens the first, and abates the predisposition of the habit, so that the latter cannot so readily exert itself. And this reasoning, probably, he supplies in contradiction to the practice of some other physicians, who were of opinion that bleeding was prejudicial, unless the first passages were previously purged, apprehending that the emptied veins might attract the vitiated humours therefrom. However; where bleeding is necessary, it should precede the administration of purgatives, as it greatly contributes in many cases to assist their operation, and renders them more effectual in producing their depletory and cooling effects. *W.*

always

always maintain, though the present practice is to exhibit cathartics before bleeding, or, which is still more dangerous, without bleeding at all.

49. For though it may be objected, that ^{The reasons for it.} by bleeding before purging, the foul humours contained in the first passages are propelled into the empty veins, yet it is most certain that the evacuation which precedes bleeding cannot make amends for the injury which the blood receives, from the tumult raised therein by the cathartic. And it must be owned, that a purge, taken immediately after bleeding, works much more gently, and heats and agitates the blood less than it usually does when exhibited before bleeding; and I am apt to think that numbers, and of children especially, have perished for want of knowing this, or through a neglect of it.

50. And this I have learnt from a long course of experience, which is the surest guide in these ^{Experience likewise in favour of it.} cases; and unless practice be regulated thereby, it were better to discard the art. For the lives of men are but too much trifled with; on the one hand by empirics, who are ignorant of the history of diseases, and the method of cure, and only provided with receipts; and on the other hand by such idle pretenders, as rely wholly upon theory: whence both together destroy greater numbers than the diseases would, if they were left to themselves.

51. But that method of practice, and that ^{The cure whereon to be founded.} only, will relieve the patient, which deduces the indications of cure from the symptoms of diseases, and afterwards confirms them by experience; by which means the great *Hippocrates*

gained such an extraordinary character. And if the art of medicine had been delivered by any person according to this method, though the cure of a disease or two might have been no secret to any of the common people, yet the whole art would then have required more prudent and skilful men than it now does, nor would it have lost any credit thereby. For as the operations of nature, upon the observation whereof true practice is founded, are much more subtle than those of any art, though established upon the most likely hypothesis; so, of course, the science of medicine, which nature teaches, will exceed an ordinary capacity in a much greater degree than that which is taught by philosophy.

Exemplified
in fevers.

52. We have a proof of this in fevers, which constitute two parts in three of the employment of physicians, and I appeal to any thinking person for the truth of what I assert. For is there an empiric, though ever so illiterate, who will acknowledge himself unable to cure a fever, if, according to the general received opinion, only these two indications are to be regarded, (1.) to expel the morbid matter by means of sudorifics, and (2.) to relieve the symptoms which succeed evacuations of this kind? For he is very sure that *VENICE treacle*, *GASCOIGN'S powder*, *plague-water*, and the like, given internally, along with a hot regimen, will force sweat; which is all he proposes in the cure of this disease, especially if he has chanced to hear of the term *malignity*. And as to relieving the symptoms, *diacodium* is in readiness to cause sleep, in case of watchings and a *glyster*, when the patient is costive, and so of the rest. But he cannot of himself discover, or judge by his
prescrip-

prescriptions, what kind of fever it is which he attempts to cure, if we only believe, as posterity perhaps will, that there are various sorts of fevers, most of which require their peculiar method of cure different from the rest; and further, that the same individual fever, of whatever kind it be, requires one treatment at the beginning, and another somewhat different through all its stages, as long as it continues.

53. Now if a person be ignorant of the natural history of the disease, which only can point out the true method of cure, how shall he be able to deduce the indications of cure from some less remarkable symptom, when he cannot judge whether it proceeds from his method of cure, or the disease itself; it would take up too much time to enumerate the manifold and minute particulars that must be attended to in the cure of this and other diseases, which being so numerous, and so momentous to the preservation of the lives of mankind, there will always be room for posterity to add to those observations, wherein the almost infinite variety of the operations of nature in the production of diseases, with the indications of cure thence derived, are delivered. Nor will the publishing such observations at all diminish, but rather add to the reputation of the art, which being rendered more difficult, only men of learning and sound judgement would be esteemed physicians. But these particulars by the way.

54. When the above-mentioned *cough* was unskilfully treated, it caused a *fever*, resembling that which was so very epidemic, in the winter of 1675, the history whereof we have already delivered. But as this *fever* was only a concomitant,

A fever arose from treating the cough unskilfully, how cured.

mitant, and an effect of the *epidemic cough*, I cured it by the same method which I have delivered above for the cure of that *cough*, viz. by bleeding, applying an epispastic to the neck, and afterwards purging thrice. For though no time was fixt for the continuance of purging in a cough unattended with a fever, which, as I observed above, is to be continued till the symptoms be considerably abated, or the patient recovers; yet in the fever proceeding from the cough, purging for three days proved sufficient to conquer it; as I have frequently observed in the constitution under consideration.

Joined at the beginning with *defluxions* upon the *lungs*,

55. But it is to be noted here, that though this *fever* was accompanied with violent *defluxions* upon the *lungs* at the beginning, yet in a month or two afterwards, when the collection of serum was gradually expelled from the blood, the fever manifestly appeared to be of the same kind, though it was unattended with a cough; the blood not having yet recovered its healthy state, so that it did not require a different treatment from that which the cough accompanied.

Continued till the beginning of 1680.

56. This fever continued in the above-mentioned manner till the beginning of 1680, when I wrote these observations; and as the year advanced, intermittents arose, which remained without any alteration till the beginning of 1685, when I was preparing the second edition for the press. And though they are less epidemic in this city now than they were during the first four years, and likewise milder, yet they rage as violently in other places as they formerly did. For the general constitution still favours intermittents so much, that I can affirm that I have not hitherto met with a continued fever,

fever, unless it proceeded from wrong management, or was one of these *intercurrents*, which generally happens every year: so powerfully does this constitution tend to produce intermittents. And doubtless the force thereof must be weakened, before that which I call the *depuratory continued fever* can become epidemic. For in the intermittent species, nature seems to operate with too much haste and violence, running through the stages of concoction and despumation of the morbid matter too soon; which happens otherwise in the depuratory fever, wherein the signs of the concoction of the febrile matter to be expelled, sometimes by sweat, or rather by a freer perspiration, do not appear before the *thirteenth* or *fourteenth* day.

57. These particulars being well considered, I doubt not that the epidemic *depuratory* fevers of the years 1661, 1662, 1663, and 1664, were only the remains of certain intermittents which had prevailed for a certain course of years before; but how long they prevailed I know not. For when the constitution which favoured intermittents became milder and declined, the fevers it afterwards generated were more humoral and earthy, whence the depuration of the blood went on by slow degrees; whereas those in the first years of this constitution were produced by more subtle principles, and, being intermittents, generally finished their course in a little time. Now, allowing this to be the case, it seems probable to me, that this depuratory fever will return as soon as the present constitution abates a little, and continue for a certain term of years, before the plague arises.

The depuratory fevers of 1661, 1662, 1663, and 1664, only the remains of some intermittents.

58. But

The bark,
where likely
to do mis-
chief.

58. But throughout those years in which this fever shall prevail (how many soever they may be) intermittents may at times appear, and perhaps prove epidemic for a short space, namely, when some manifest temperature of the air shall contribute thereto. Whether the bark will cure this fever as certainly as it usually does the present reigning intermittents, I cannot say; but if it be given in the plague, and the continued epidemics which will regularly follow this, we must expect the same effects from it, which we now find it produces in the *pleurisy*, the *peripneumony*, *quinsy*, and the like inflammatory fevers, in which disorders it not only does no service, but is manifestly pernicious. But however this be, epidemics will succeed each other hereafter, in the manner above delivered, provided nature does not deviate from the order it hath kept for these last twenty-four years.—And these, Sir, are the principal observations I have made of the epidemic diseases of the foregoing years.

Mischief of
curing the
rheumatism
by copious
bleeding.

59. As to the cure of the *rheumatism*, which you likewise desire to be informed of, I have frequently regretted, as well as you, that it could not be accomplished without the loss of a large quantity of blood by repeated bleeding; whereby the strength is not only impaired for a time, but weak persons are usually more disposed to other diseases for some years; when the matter occasioning the rheumatism afterwards falls upon the lungs, the latent indisposition in the blood being put into action, by taking cold, or some other slight cause. These reasons induced me to search after some other method of curing this disease, than such repeated bleeding. And having well considered, that it seemed to proceed

ceed from an inflammation, as appears from the other symptoms, but especially from the colour of the blood, which exactly resembles that of pleurifies, I judged it might probably be as successfully cured by a plain, cooling, and moderately nourishing diet, as by repeated bleeding; and the inconveniences likewise attending that method avoided. Accordingly I found that a diet of *whey* used instead of bleeding had the desired effect.

Whey advantageously used in its stead.

60. I was called last summer to Mr. *Malibus*, an apothecary in my neighbourhood, who was afflicted with a severe rheumatism, accompanied with the following symptoms: During the first two days he was attacked with a lameness in his hip, which was succeeded by a dull pain of the lungs, with a difficulty of breathing, which likewise went off in two days, then he was seized with a violent pain of the head, and soon after with a pain of the right hip, which was first attacked, and afterwards almost all the joints of the arms and legs were affected by turns, according to the nature of the disease. As he was of a weak and dry constitution, I was apprehensive that by taking away too much blood, his strength, which was already declining, might be quite exhausted; especially, as the summer was so far advanced, that it was to be feared that winter would come, before he could recover his strength impaired by frequent bleeding; and therefore I ordered him to live upon whey only for four days, after which I allowed him white bread, besides the whey, for his common food, namely, once a day, instead of a dinner, till he recovered. Contented with this slender diet, he persisted in it eighteen days, only towards the latter

Illustrated by a case.

latter end I permitted him to eat white bread at supper also. He drank a gallon of whey every day, which afforded him sufficient nourishment. At the end of this term, when the symptoms were gone off, and he got abroad, I allowed him to eat flesh; as boiled chicken, and other food of easy digestion. But every third day he lived upon whey only, till at length he recovered, and by this method escaped the inconveniences I mentioned above, which had been very troublesome ten years before, when frequently repeated bleeding was used by my order for his cure.

This method not to be contemned for its plainness.

61. If any one should lightly esteem this method, by reason of its inelegance and plainness, I must tell him, that only weak minds slight things because they are common and simple; and that I am ready to serve mankind, even at the expence of my reputation. And I must add, that, were it not for the prejudice of the vulgar, *I am certain that this method might be suited** to other diseases, which I shall not now enumerate.

* *I am certain that this method might be suited, &c.* The admirable and approved virtues of whey appeared so well deserving notice to Dr. Hoffman, that he wrote a dissertation to recommend it to more general use. The ancients, he observes, highly esteemed it, and frequently used it in those disorders which proceed from an acrimony of the juices, as ulcers of the lungs, bladder, and kidneys, the leprosy, various eruptions of the skin, ulcerations of the fleshy parts, and obstructions of the viscera, &c. They often prescribed it to be taken in a large quantity, and continued for a considerable time; but with this caution and difference, that when only the first passages required cleansing, it was to be drunk more sparingly, and only for a few days, but more copiously and longer in deeply-rooted and obstinate diseases.

enumerate. And in reality, it would be much more serviceable than the pompous garlands of medicines, with which such as are ready to expire are crowned, as if they were to be sacrificed like beasts.

62. But that the most common things may be so ordered by a skilful physician as to prove preventive of imminent death, will appear from the following observation; which, though it has no relation to the disease under consideration, is not quite foreign to my purpose. About two months since a person in my neighbourhood desired me to visit his servant, who had taken a

Its excellency illustrated by a parallel instance, of a person who had swallowed poison.

The author recommends it in a *hypercatarsis*, whether occasioned by drastic purges, or some kinds of poison, the scurvy, all diseases proceeding from, or attended with an acrimony or foulness of the juices, hypochondriac and hysterical complaints, and in the beginning of a dysentery. He farther tells us, that it is a safe and excellent laxative in all kinds of fevers, the small pox, measles, and all feverish disorders, exhibited by itself, or with *manna*, *syrup of rhubarb*, *cream of tartar*, *sal polychresticum*, and the like dissolved therein, as the case demands. He adapts the quantity to the circumstances, directing a pint to be taken at several times in the morning, by persons of a weak stomach, and a quart by those of a strong constitution; and sometimes repeating it in the afternoon, but in a less dose, and always limiting the time of the course to the duration and obstinacy of the disease.

He observes, that if milk be suffered to stand till it grows sour, or its whey be separated by the admixture of an acid, it is much injured thereby, loses its grateful sweetness, and rather contracts an acidity, which renders it disagreeable to the human body. To avoid these inconveniences, therefore, he makes a whey in this manner: He evaporates a quantity of new milk, over a gentle fire, to dryness, keeping it constantly stirring, to prevent burning; then pouring as much water to the remainder as there has been milk exhaled, he boils them together for a few minutes, and, lastly, strains off the liquor for use.—*Dissert. de salub. ser. Last. virtut. sparsim.*

large quantity of *mercury sublimate*, being melancholy mad for love, as I afterwards heard. The poison had been swallowed near an hour when I came, and his mouth and lips were much swelled; he was extremely sick, had a burning pain in the stomach, and was almost killed with heat. I ordered him to drink three gallons of warm water as quick as possible, and to take a large draught of the same after each time of vomiting; and as soon as it appeared, from the gripings, that the poison was going downwards, I likewise directed warm water alone, to be plentifully thrown up by way of glyster, in order to wash his bowels. The wretch complied, being now very desirous to live, and drank several pints of water more than I had directed. He told his friends that were by, that the water which first came up was very acrid, by reason of its being saturated with the poisonous salt; but that it was less acrid after every vomiting, till at length it became insipid, and the gripes that succeeded were remedied by injecting water alone, glysterwise. By this simple method the patient was recovered in a few hours, only the swelling of his lips did not immediately fall, and his mouth remained ulcerated, occasioned by the particles of the poison, which came up with the water by vomiting; but these symptoms yielded in four days to a milk diet. I preferred water to oil, (which is generally used by the unskilful without success) and all other liquors, because being very thin, it seemed fitter to absorb the particles of the poisonous salt, than any other liquor that was thicker, or already impregnated with the particles of some other body.

63. But to return to the *rheumatism*: how suitable soever a milk diet may be to young persons, and such as have lived temperately and by rule, it is notwithstanding unsafe to treat the aged in this manner, and such as have long accustomed themselves to too free an use of wine and other spirituous liquors; for it injures their stomachs, and by considerably chilling the blood, disposes to a dropsy. In this case, therefore, it is highly proper to use nearly the same method of cure, which I have already delivered; though since I wrote that, I have found by experience that it is better after the second, or at most the third bleeding, to purge often, till the symptoms go off entirely, than to trust to bleeding only. For purging being an assistant to bleeding in the cure of this disease, it will not be necessary to lose so much blood; and besides by this means there will be place left for opiates, which otherwise must be refrained, how severe soever the pain might prove, because they fix the disease, and it does not yield so easily to bleeding. But the purgatives should be of the milder kind, as *tamarinds*, *sena*, *rhubarb*, *manna*, and *solutive syrup of roses*; for such as are made of *scammony*, *jalap*, and the like, occasion great disturbance, and increase the pain. And every evening after the purge has done working, let an ounce of *diacodium* be given somewhat earlier than ordinary.

The aged in a rheumatism not to be treated by a milk diet.

64. It must be noted here, that during the present constitution I have met with a certain symptom, at one time resembling the *rheumatism*, and at another the *nephritic pain*, in the violent pain in the loins; which, as it used to succeed intermittents, proceeds from a translation

A remarkable symptom accompanying intermittents.

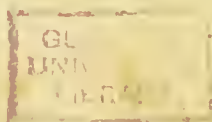
tion of the febrile matter to the muscular parts of the body. But this disorder did not require a different treatment from the intermittent which it accompanied; for it is increased, and life endangered, by frequent bleeding, and any other evacuation.—I judged it proper to drop this short hint concerning it, that no one might be misled thereby.

65. To conclude. These, worthy Sir, are the particulars which I have learnt from diligent observation, relating to the diseases which are the subject of your inquiries; and if they prove acceptable to you, or useful to others, I have gained my end; at least I enjoy the satisfaction of having done my duty, by complying with your request in the best manner I am able, who am ever

Your most devoted servant,

THO. SYDENHAM.

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